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# East Europe Report

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18 SEPTEMBER 1986

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## AERIAL APPLICATION OF FERTILIZERS, CROP PROTECTION AGENTS

## Ecological Benefits Cited

East Berlin AGRARTECHNIK in German Vol 36 No 7, Jul 86 p 329

[Article from ADN: "New Things in Agricultural Aviation: Ecological Fertilizer From the Air"]

[Text] The use of aerial techniques is a sensible supplement to the employment of ground equipment and guarantees an excellent quality of fertilizer distribution. In the past thirty years, agricultural aviation has become an important factor in the intensification of the GDR's agriculture, and nowhere in the world can one any longer conceive of modern agriculture without it.

Nevertheless, at the same time this development yields a growing responsibility to guard against polluting the air, waterways and soil, for example, with the nitrogen compounds (nitrates) frequently used to improve the soil. Here, one should consider that the use of agricultural airplanes and helicopters contributes in and of itself to an ecological treatment of areas being used for production. Agricultural aviation not only aids farmers at the most favorable agro-technical times in the affected ecosystems, but also avoids mechanical pressure on the soil and damage to plants.

Those involved in agricultural aviation in the GDR take ecological interests into account with many different measures. For example, scientifically founded and empirically proven applied technologies for every type of fertilizer and for every type of aircraft are at the disposal of the pilots, which are used to apply only as much material for improving the soil as is actually needed. These guidelines, corresponding to the most recent state of science and technology, are continually updated. Adherence to the guidelines is subject to strict control, which at the same time contributes to an economical use of fertilizers.

Precisely prescribed safety distances together with consideration of the prevailing weather conditions are employed to prevent chemicals from drifting onto neighboring cultivations, inhabited areas, or livestock production sites, and also serve to eliminate the accidental treatment of fish-bearing waters and of dams and protected zones for drinking water.

To prevent uncontrolled pollution of groundwater and losses due to debris, all loading sites for airplanes and helicopters have been covered with concrete in recent years. Special sealed valves, collecting tanks and covers for chemical containers, make it possible to prevent unintentional release of fertilizer, for example, when approaching a field.

Concentrated research into increasingly ecological methods of aerial fertilization continues. Numerous specialists are involved in this at the GDR Academy for Agricultural Sciences, especially at the Leipzig-Potsdam Institute for Fertilizer Research, the Eberswald Forestry Institute, and the Agricultural Aviation Testing Base in Ogkeim (Halle District).

#### Cooperation With Czechoslovakia

East Berlin AGRARTECHNIK in German Vol 36 No 7, Jul 86 p 329

[Article from ADN: "New Things in Agricultural Aviation: Successful Flying Season for Agricultural Pilots."]

[Text] The past two years were the most successful to date for the GDR's agricultural pilots. Each year, more than five million hectares of cropland, meadowland, fruit plantations and forests received fertilizers, pesticides, and other crop protection agents. The agricultural pilots thus made an important contribution to high yields and a healthy forest.

During the five-year plan for the 1980-85 period, we succeeded in treating fifteen percent more productive land, 23 million hectares, than in the seventies. This result is especially significant since it was achieved with the same fleet of airplanes and helicopters through higher performance per flying hour, longer use of aircraft, and aerial-chemical work of very good quality. The technicians also gave a top performance in that they reduced the technologically necessary idle times for servicing aircraft from an average of three days to one. In this manner, the entire fleet was more than 90 percent operational during the spring of 1985.

Thus, the engineers from the GDR, together with specialists from the CSSR, succeeded in using a Z-37 airplane (country of origin CSSR) almost 3,000 flying hours longer without a ground overhaul than was planned by its designers. The CSSR State Aviation Inspection confirmed this impressive result, which thus far is unique in the world.

A further example of the application of scientific-technical knowledge is the work of the Young Researchers Collective in the Agrarflug concern. Together with students and scientists from the Friedrich List College of Transportation in Dresden, they developed a mathematical model for flight preparation. Using a pocket calculator, the pilot now can determine the most favorable flight variants without spending a lot of time. The economic benefit was more than half a million marks in 1985 alone. The comprehensive application of new research results also demands specific schooling and further education.

Currently, around 80 percent of the agricultural fliers have agro-chemical or agricultural engineering as a second profession. One can no longer conceive of agricultural aviation disappearing as an intensifying factor in agriculture. Essential advantages are, for example, no vehicular routes to crowd the ground and so no damage to plants. The focal points of the work are the fertilization of grain fields every spring, at the proper time and with the proper quality, and crop protection. In years when the weather is unfavorable, aircraft offer virtually the only possible means of supplying the grain with the needed nutrients at the agro-technical point in time. The same is true of late fertilization in May to help the harvest. Meadowland in the low mountains can often be treated only from helicopters.

Close cooperation between agricultural fliers, farmers and agro-chemists has proven advantageous. It pays off to have the squadrons technologically integrated into the agro-chemical centers. Many pilots and mechanics live with their families in the villages. Interflug supports this. In this way, the pilots know the microclimate of their field of action, as well as the position of the fields, the specific plant growth, and both artificial and natural obstructions.

Further development and expansion of the airborne system of applying fertilizers and pesticides with agricultural aircraft and ground techniques so that it is of a high quality technologically corresponding to production processes is an economic goal. To this end, institutes of the GDR Academy for Agricultural Sciences and CEMA airplane manufacturers have cooperated closely during the past two years in testing both agricultural aircraft and application equipment over several months in order to determine an optimal variant for a new generation of agricultural aircraft that will be used in the GDR in the coming years. The first planes of the M-18A type (country of origin People's Republic of Poland) have already proven themselves in 1985.

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## TRAINING, MANAGERIAL REFORMS PROMOTE LPG CHAIRMAN'S CAREER

Hamburg DIE ZEIT in German 18 Jul 86 p 10

[Article by Marlies Menge: "GDR Biographies (V): The LPG Chairman"]

[Text] Hubert Berger must have a soft spot in his heart for art. His small office is not graced by the photograph of party boss Erich Honecker in his younger years, but by a painting showing harvesting in the country as it was done in the old days: a horse-drawn wagon on which busy people are piling sheaves of grain. Perhaps they are Polish harvesters, who in those days often helped out in this region. Hubert Berger lives in a former "harvester caserne" at the nearby lake. Gramzow--Kreis Prenzlau, now in the district of Neubrandenburg--is hardly 50 km from Poland.

The picture does not conjure up any nostalgic memories of the time of his forebears. Berger's father was a locksmith in a small town in Thuringia, in Bad Koesen. This is where son Hubert grew up. "In the valley of the Saale river," he says, "especially nice scenically." A note of nostalgia is evident here, understandable with someone who has resettled from the delightful Thuringia to the austere, flat Uckermark.

Berger was 3 years old when the war ended. He attended grade school for 8 years, then received a secondary school diploma by attending adult evening classes, and learned farming. "That was a matter of personal interest," he says. Why farming? "Well, as a student I took part in harvesting details, at that time still for individual farmers. That got me interested--everything that had anything to do with farming."

He sits facing us, tall, stocky and white-haired, a farmer as city-dwellers would imagine him to look: with the quiet self-assurance of a person who deals with nature and animals; a host who can offer his guests sandwiches with sausage and ham from the LPG's own production; not an "industrial worker on the land," which the GDR at one time wanted to make the members of the LPGs, so as to abolish, at least in theory, the differences between city and country.

And with that we are back to the harvest painting of yesteryear. Perhaps it is meant to tell the beholder that there is a "cultural legacy" in the country which is worth remembering. On the large fields of today's LPGs there will hardly be a return from the 125-horsepower combine to the horse and wagon.

And yet gradually the perception is gaining acceptance that the traditional should not be summarily rejected, as was for a long time the case in GDR agriculture.

When we were parking the car, we noticed another painting, painted on the front of a house of more recent vintage than the harvest painting, commissioned by LPG chairman Berger from a painter of the LPG who has a penchant for art. It shows the cycle: soil-plant-animal. "That is supposed to illustrate the natural cycle to the people of the village," says Berger. He considers this cycle significant. He experienced all major changes in agriculture following collectivization: in 1972 the founding of the KAP [Kooperative Abteilung Pflanzenproduktion (Cooperative Department for Plant Production)], then in 1980 the separation into LPG P (plant production) and LPG T (animal production). And now, over both, the roof that is to rejoin the two: the council for cooperation, of which Berger is the chairman.

And it is for that reason that he is so well informed in the LPG P: for example, that the basic field size measures 100 hectares. "We have brought this back to a sensible size," he says. He admits that mistakes were made. "We are now also preserving the bogs," small marshy pools in the middle of the fields, important for the animals which aid in pest control. He is also re-introducing hedgerows. His cows stand on straw: "This is an important fertilizer, after all." He has put the pigs on liquid manure. Before the heifers are inseminated, they are put out to pasture. Thus every LPG cow was a happy cow for part of its life.

Berger intends to cling to many a tradition. However, at no time does he give cause for the slightest doubt that he views the basic agricultural system, the cooperative ownership, as absolutely correct. He is deeply convinced that the farmers in the GDR are better off than the farmers in the FRG, if only because of their regular working hours and their fixed salaries. His opinion is not shaken by the fact that GDR agriculture, despite all efforts, still produces less than that of the FRG, which if anything admonishes its farmers to ease off on production.

Berger learned farming on a people's-owned farm near Schulpforta in Thuringia. "A farm such as exists in your country, with cultivation and animals, specializing in the training of people for agriculture." He completed his training in 1960--in the year in which collectivization was concluded. "In 1960 we had our socialist spring in the country," he says, and it sounds a little ironic. Despite that, he turned his back temporarily on country life; for 3 years he served as a sailor on the high seas: "That was a dream of my youth." For that reason he extended his service time with the army.

When Berger returned, there was an appeal from the FDJ for young people to go to the northern part of the country. "The north was thinly populated; there was a lack of workers; it was hard to keep the young people there." He agreed to recruitment. His first assignment was to a people's-owned farm in the kreis of Altentreptow in the district of Neubrandenburg; from there he went to the engineering school in Prenzlau, a specialized school. Then, in 1964, he was sent for practical training to Gramzow. Why Gramzow? "That was

because of the graduate management system. For the first year, one has to go wherever one is sent."

Berger stayed in Gramzow. He married here. His wife is from Prenzlau. Her father is likewise no farmer, so that he [Berger] did not marry into a farm. But the newlyweds immediately got an apartment in a new housing complex in Gramzow.

During his practical training, Berger milked cows and drove tractors, and for that matter did everything that came up. "Then I became head of a work brigade in the animal production field, at that time hog and milk production." In 1972 he began taking a correspondence course at the Humboldt University, which he completed in 1976. Since then he has been a graduate agricultural engineer. But anyone who asks him what his profession is gets the answer: "Graduate agriculturalist." In 1973 Berger became chairman of the LPG. His wife works in the feed laboratory of his LPG.

Next to the canteen, where the farmers eat, is the parlor of the LPG. The walls are covered with wooden wainscoting, the chairs and tables are likewise made of light-colored wood. Here the painter with the artistic vein painted sayings [saws], not the customary slogans of the palpably existent socialism, but peasant sayings in the Low German dialect of the area: "When diligence and intelligence team up together, it is noticed by the cow in the barn, by the blade in the field." The pork tasted wonderfully of pig; it comes from the LPG's own production, where no hormones are fed.

Berger considers it right for the farmers to raise their own animals: "They buy the chicks and goslings in the farmers' trade cooperative. Pigs and bulls they buy from us. Every farmer slaughters a quarter of his pigs for his own use; the rest are sold." And everybody has his piece of land. "What do you call this?" we ask him. "A garden, in plain German," he says. And yet at another time he speaks of "storage space" and explains: "You call it a granary."

Berger feels at home in Gramzow. Could it not happen that he will be reassigned to another LPG because someone like him is needed there? "The party is capable of doing this," he says. There would be no contradicting the decision of the party, even though meanwhile the Bergers have become attached to their own house in Gramzow, which they built in 1978. Only then did they think of offspring. Their children, 6 and 2 years old, spend the day in the kindergarten and nursery.

Berger appears to be less interested in raising his own cattle and land than the other farmers--perhaps because he is not familiar with it from his childhood. He raises neither bulls nor pigs, only a few chickens ("no Leghorns, they're not heavy enough for my taste, Sussex"). "Herbs and a few carrots and strawberries, for the children." No cat, no dog? "Oh yes," he says, "a dog." And this is no village mutt, but one whose ancestors were bred in palaces: a pekinese.

12689/12947

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## PRIVATE FARMING SUPPLEMENTS STANDARD LPG PRODUCTION PROFILE

Hamburg DIE ZEIT in German 18 Jul 86 p 11

[Article by Marlies Menge: "Private Property Flourishes Best of All--A Visit to an LPG in the Uckermark"]

[Text] The LPG in Gramzow, Mecklenburg, is called "Solidarity." It has nothing to do with "Solidarnosc" in nearby Poland, however. Solidarity a la GDR means: support of Third World countries and national liberation movements. For this cause the citizen of the GDR is expected to contribute his two cents worth: with a donation at his place of work, by crocheting pot holders for one of the many "Solidarity bazaars," or, if nothing else, by having an LPG named "Solidarity."

1. The first LPG in Gramzow was established in 1953, at the beginning of collectivization. It had seven members and all of 20 hectares of land. Not until 1960, at the end of the collectivization drive, did the last farmers join the LPG. Today there are three LPGs in Gramzow. They work a total of 4300 hectares of land, they have 400 dairy cows, just under 4000 head of young stock, and 4000 pigs in the cooperative stable. The LPG is also responsible for the production of cattle and pigs.

I have a problem each time I use the word "production" in conjunction with animals and plants, yet in the GDR the word is used downright beseechingly. The cooperatives are production cooperatives of plant production and of animal production. Almost as if with this word alone the quality and quantity of grain and cows could be improved.

Strictly speaking, the LPG "Solidarity" does not even produce all its animals but rather buys them from the enterprise VEB Tierzucht [State Enterprise for Animal Breeding]: "They have good genetic traits and are heavy producers of milk and/or meat," we were told by the LPG chairman. The pigs are purchased when they are 100 days old and are sold when they are 220 days old. At that point they are ready for insemination--the LPG as a transit station. The male animals are slaughtered, with many of them ending up in West Berlin. Anyone familiar with the GDR knows what that means: these pigs are put into an especially high quality class--only the best for hard currency.

Many dairy cows and heifers are purchased, others are self-bred. Circa 1500 of all the heifers, before being artificially inseminated, are put out on permanent grassland, in other words, to pasture. This belongs to the LPG. In Gramzow one has succeeded in doing what for a long time threatened to be lost as a result of over-specialization: the plant producers supply the feed for the animal producers, the animal producers supply the plant producers with cow and liquid pig manure for fertilizing. The cooperative farmers responsible for the plants are dealing with the terminal moraine region of the Uckermark, traditionally a land for grain and sugar beets. Today, too, a good half of the land is used for cultivation, especially with wheat and oats. The yields are almost as high as in the FRG. The production of sugar beets does not yet satisfy the chairman of the LPG. "It is too labor-intensive, much still needs to be done by hand." He is not the only one who feels this way, this is a problem throughout the GDR. There are four workers per 100 hectares, on which 100 to 120 horsepowers of mechanical energy are employed. The farmer is therefore more a technician.

An LPG member earns an average of M 11,500 per year. The highest monthly wages are around M 2,500; a simple administrative worker receives M 650; milkers are paid from M 1,100 to M 1,200 per month. The most that is withheld for social insurance (health insurance and retirement) is M 60. The incentive premium pay is separately computed for each collective. "Agreements are worked out with the collectives: you will have to produce so-and-so-much, and then you will receive the bonus. The more they achieve, the more money they get." Everyone gets 90 percent of his assumed wages at the end of the month; the bonus is always paid at six-month intervals.

The farmers earn an estimated additional M 5,000 to M 6,000 a year through work on the side; up to M 7,000 per year are tax-free. "As soon as someone marries and starts a family, he also has his own pig in the stable." How many does he have? "As many as he wants, as many as he can feed. Here everyone has his own plot of land, 2,500 square meters that he can work on his own. Here with us this is done on a cooperative basis, and the natural products, usually for raising cattle, are individually delivered to everyone's house."

The GDR seems to have reconciled itself to the fact that private stables and small private fields are being more economically run than the large LPGs. Ten to 12 percent of the cattle destined for slaughter come from the private enterprise sector, 40 percent of the eggs, almost 100 percent of the rabbits, 30 percent of sheep's wool. The state purchasing agencies often pay the farmers twice as much money as the consumer must later pay in the store. The difference is subsidized by the state. In this way the farmers often manage to save a lot of money. Anyone wanting to sell an old Trabant [automobile] is glad to sell it in the country, where he can demand the most for it.

Environmental problems do not seem to exist in Gramzow. Chemical fertilizers, especially nitrogen, are used, to be sure, but allegedly the ground water is not affected. The LPG conducts analyses, e.g. the

nitrate-nitrate test: if nitrate-nitrite is found, no more nitrogen is applied. The LPG uses as few pesticides as possible. Once, however, it had to pay a fine of M 20,000. On that occasion, potatoes had been braised for feeding to the pigs, and the water from the machine ran into the lake. The starch was harmful to the water.

Ecological cultivation is unknown in Gramzow. "We make sure there is a sensible succession of crops." The fact that fertilizing of the soil is not limited to the straw manure of the cows and the liquid manure of the pigs becomes evident to us on the way to the stable: circling high above us is an aircraft, which together with its pilot has come from the Soviet Union to assist in chemical fertilizing from the air.

We put on brand-new rubber boots. With these we wade through a bowl containing a disinfectant liquid. Because of the danger of infection, the stables used for the mass raising of animals are usually closed to visitors. Our being allowed to view the Gramzow pigs up close is a major exception.

The pigs come running forward inquisitively, grunt good-naturedly at us. They still make a fit and lively impression, not as infarct-threatened as their older, overly fattened compatriots. It is very clean in the stable. The pigs stand on grates, the liquid manure runs via underground pipes into a tank located outside the stable, from where it is then taken out to the fields.

Eight people are responsible for 4,000 pigs. One of them accompanies us into the stable. He tells us that he is fattening bulls at home. He buys a bull for M1,000 and 2 years later sells it for M5,000 to M6,000. He has two bulls in his private stable, as well as four pigs and 50 to 60 chickens. One of the pigs is slaughtered for his own use, the other three are taken to the state purchasing point. In exchange for the eggs that he delivers he receives chicken feed. In the old days he had his own farm with 47 hectares of land. Now he is a state-certified agriculturalist, specializing in pig breeding. His wife is a milk inspector. He tells us this very matter-of-factly. We cannot tell from listening to him whether he prefers the old or the new system.

The village of Gramzow has 1600 inhabitants, one baker, one automotive workshop, three churches: one Catholic, one Evangelical (Protestant), and one New-Apostolic. Every third Sunday in June, coincident with the Day of the Cooperative Farmers, Gramzow celebrates its village festival. There is singing by the choir from the village, competitive fishing and dancing, and playacting on the open-air stage. The residents of Gramzow must learn to love their village, so that each of them is glad to be living there.

12689/9190  
CSO: 2300/472

## BRIEFS

POLISH PLANT FOR ALBANIA--A Polish sulfuric acid plant will be built some 40 km from Tirana and 7 km from the Adriatic. in the town of Lac in Albania. Several weeks ago the Katowice "Centrozap" signed the appropriate contract with the Albanian partners. The Krakow firm, "Chemadex," is the general supplier and the official executor of the installation which will have equipment from more than 10 manufacturers from the entire country. The factory which is the first complete Polish industrial unit sold on this market will produce 200 tons of acid a day and will be constructed during 1987 and 1988. This plant will be completely Polish, from the technology of obtaining sulfuric acid from pyrite to the specifications, delivery and monitoring of the installation of the equipment and the start of operations. The investor says that the installation work will be done by local workers but it has not yet been ruled out that this work might be done with the assistance of Polish specialists. Jerzy Urbanik, the director of the Krakow "Chemadex" firm told the GAZETA reporter: "Everything indicates that after lean years we will gradually recover a good position in regard to the delivery of complete industrial units." [Text] [Krakow GAZETA KRAKOWSKA in Polish 10 Jul 86 p 2] /8309

CSO: 2600/647

## ECONOMIC CONSEQUENCES OF EXPANDED FOREIGN CONTACTS

Frankfurt/Main FRANKFURTER ALLGEMEINE ZEITUNG in German 21 Jul 86 p 4

[Article by V.M.: "Albania Wants More International Contacts: Impressions of a Greek Delegation; Freedom of Religion"]

[Text] Athens, 20 July--Albania continues to send out cautious signals that it wishes an expansion of its international contacts with a sizable number of Western countries; however, concrete steps develop only slowly. This conclusion has apparently also been reached by a Greek delegation which, under the direction of the secretary general of the foreign ministry in Athens, visited Tirana about 2 weeks ago. Several Western news agencies published stories about this visit, according to which firm agreements had already been reached, for example to institute a ferry service between Corfu and the Albanian port of Sarande as well as a regular exchange of tourists. The foreign ministry in Athens states, however, that no such agreements were reached; the only thing involved were suggestions, which the Greek side presented and which the Albanians promised to study. The same is also true as far as cooperation is concerned between the respective state information media as well as in the cultural area. Likewise discussed again were the Greek minority, whose number was given by the Albanians as approximately 45,000, as well as the question of repatriation of former Greeks and the question of incarcerated members of the Greek minority.

To date the government of Papandreou, a few declarations of intent notwithstanding, has not lifted the state of war which in its opinion still formally exists between the two countries. Just recently Papandreou again went only so far as to confirm his government's intention to clear the road of this sociological curiosity. In the Greek foreign ministry, it is said that de facto it has for a long time already not been possible to speak of a "state of war" anyway, for which reason a number of Greek legal provisions would have to be reviewed.

The difficulty of arriving at concrete agreements with Albania also continues to be apparent to the FRG. Recently it was repeatedly rumored that the two governments were on the verge of an agreement to establish diplomatic relations. Contacts on this matter took place in Vienna and before that also in other places. But one hears that such an agreement should not be reckoned with in the foreseeable future, and also that no new round of talks has been scheduled.



The FRG has clung to its position, whereby it is neither authorized nor able, based on the London accord on debts of 1953, to pay reparations to Albania. It has, however, met Albania more than halfway by advancing the idea of indirect developmental aid via an international organization, and has itself suggested the text of a statement to Albania with which Tirana could basically adhere to its position in the question of reparations. The FRG would most likely even be willing, in conjunction with a one-time developmental aid package to mark the establishment of diplomatic relations, to drop several conditions which it otherwise attaches to such aid.

The limited and recently even further diminishing export capacity of the country represents a big obstacle to the expansion of Albanian contacts with other countries. Since Albania does not accept any credits, it can in principle import only in the same amount as it exports and collects in foreign currencies through other means, even if it does occasionally try to expand these limits through stretching out payments. Now in the last few years and months almost all Albanian export products have been drastically cut in price on the world markets, first the ores and metals, then the agricultural products, and finally the crude oil products. Albania's purchasing power per year, compared to as recently as 4 to 5 years ago, most likely fell, in real terms, by an estimated 30 to 40 percent from the nearly \$500 million it took in then from all its exports. Albania evidently has major economic problems, since under the currently prevailing circumstances the planned renewal cannot be taken on. For that reason, reflections have apparently begun in Tirana, after a long delay, that, contrary to past policy, tourism should perhaps be expanded after all.

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## CEMA COOPERATION RESULTS SEEN AS DISAPPOINTING

Prague HOSPODARSKE NOVINY in Czech No 27, 1986 p 3

[Article by Eng Alexandra Velharticka, Economic Institute of the Czechoslovak Academy of Sciences, Prague: "Extensive Methods Show Inadequate Results"; first paragraph is HOSPODARSKE NOVINY introduction]

[Text] International specialization and coproduction involving CEMA member states has, for the time being, not resulted in such effects as would be possible for the Czechoslovak economy. Some causes of this status and possibilities for overcoming it from the Czechoslovak standpoint were dealt with in HOSPODARSKE NOVINY, No 25, 1986, by S. Novak. However, it is obvious that the effort to create a pro-coproduction climate in Czechoslovakia in and of itself is not adequate. Specialization and coproduction contacts with CEMA are, in general, accompanied by some negative phenomena which bear witness to the fact that, thus far, these contacts have been predominantly extensive in nature. The way to their elimination is, among others, the perfection of an international management mechanism dealing with specialization and coproduction in CEMA in conjunction with national management systems.

After adoption of the Comprehensive Program of Socialist Economic Integration in 1971, international specialization and coproduction developed rapidly in CEMA. For example, during the first half of the 1980's, the volume of mutually exchanged specialized production among CEMA countries amounted to more than four times the volume of this exchange in 1975. More than 1,000 multilateral and bilateral agreements covering production specialization and coproduction, etc., were concluded. These and a number of other positive quantitative indicators, however, are influenced also by price movements and by the fact that contracts covering specialization and coproduction were concluded in past years even with respect to commercial transactions which had been conducted up to that time as simple foreign trade transactions, without any changes in production and technological characteristics of the actual production involved.

This is why the qualitative side of coproduction relationships involving CEMA is being viewed less optimistically. The majority of specialized and coproduced products are final products, whereas higher forms of coproduction and specialization (parts and key components) are inadequately developed. These forms of management only account for about 1 percent of the total export based

on contracts dealing with specialization and coproduction. This is accompanied by additional negative phenomena, as a result of which agreements dealing with pure specialization predominate over coproduction agreements. For example, the share of coproduced engineering exports in the overall volume of deliveries based on appropriate contracts amounts to not quite 20 percent. Under these circumstances, the economic results of specialization and coproduction measures are not overly conspicuous, for the most part. This is reflected in the high prices of products delivered and in the lack of interest on the part of producers in participation with respect to CEMA specialization and coproduction.

The above-listed facts indicate that, thus far, it has not been possible to fully utilize the advantages of this form of cooperation and that, for the time being, this form of cooperation has been developing along extensive lines. One of the causes of this status are the reserves in utilizing the integration instruments of management in international specialization and coproduction as they tie in with national management mechanisms. It is clear that old forms and methods of management which have thus far assured the development of specialization and coproduction in CEMA will not suffice.

#### Activate Enterprises With Respect to Integration

An increase in the efficiency of international specialization and coproduction in CEMA is primarily unthinkable without fundamental changes in the initiative of producing organizations in the individual countries, without strengthening their responsibilities for the efficient fulfillment of adopted pledges. Commitment to international coproduction tends to result in problems for economic units: it aggravates the demanding nature of imports, demands increased quality requirements, increased reliability and timeliness of deliveries, increases the risks in the event of failure to fulfill coproduction pledges, both with respect to foreign as well as domestic suppliers.

Fundamental changes in the conduct of enterprises, thus, presuppose that such measures to activate the microsphere will be adopted so as to mobilize their reserves effectively and permanently, as much as their interest in increasing quality and the technical-economic parameters of their products. However, such measures must have general validity even in the domestic economy. The low level of coproduction within the national economy would be a source of risks for the internationally specialized producer--risks through no fault of his own--if he were to clearly accord preferential treatment to the less demanding environment of the domestic economy.

Along with increasing the responsibility of economic organizations for the results of foreign trade transactions, it is necessary to expand their share in decisionmaking regarding appropriate questions and their independence of action with respect to foreign partners. The development of higher forms of specialization and coproduction (direct relationships) cannot even be visualized without direct contact between cooperating organizations which have detailed knowledge regarding the technical and economic conditions of the production involved, which are familiar with the possibilities of their domestic and foreign partners, etc. Direct contacts between economic organizations of

CEMA member nations should gradually, and must gradually, acquire an economic nature, based on the principle of cost accounting, in addition to their information-exchange character.

From the systems standpoint, the possibilities of developing such direct relationships among economic organizations in CEMA are expressly determined by the valid system of material incentives in the enterprise sphere, the distribution mechanism and other aspects given by the planning system and by the management of the national economy. The entity which initiates direct relationships must also be equipped with an essential measure of independence in decisionmaking, a certain independence in the eyes of the state budget, and a legal subjectivity which entitles it to initiate relationships with foreign countries. The question of connections between the production sphere and foreign trade organizations or possibly a partial delegation of the authority to engage in direct foreign trade activities to producer organizations or their associations remains unresolved.

The planned management systems of the majority of CEMA member nations have thus far not adequately stimulated the enterprise sphere toward the development of direct relations. Currently, a number of substantive systems changes which support the prointegrational conduct of enterprises are being adopted in CEMA countries. These changes are inseparably connected with the review of the function of economic instruments--prices, credits, foreign exchange rates, etc.--in the management of the socialist economy.

If direct contacts in the international sphere are to be stable and reliable, it is necessary for enterprises in various countries to have approximately the same legal rights and responsibilities in initiating and realizing such relations. In this respect, the bringing together of the national management systems of the CEMA member countries plays an important role.

#### Centralization or Decentralization?

Through the activation of the conduct of producing enterprises it is possible, to a certain extent, to solve their own efficiencies, but not the problem of the efficiency of the national economy as a whole. This depends on the efficiency of its individual components as well as on the selection of the optimum composition of various production operations (branches, sectors, etc.). This composition is, to a certain extent, preordained by natural conditions. It is the effort of the national economic center to change these starting conditions for international specialization and to shift the production structure toward more progressive production operations, which can be anticipated to yield the highest profits in the future, by committing them to the international division of labor. But it is not possible to change even a clearly unsatisfactory production structure at once. The majority of the large structural changes are investment-intensive and very time-consuming and, among others, require that production be supported by deliveries of raw materials and materials, by the establishment of the appropriate scientific research base, and by the requalification of manpower. Newly established production processes also, for the most part, do not result in the anticipated profits immediately during the first phase. The safeguarding of such structural intentions, therefore, logically is beyond the possibilities at the disposal of the enterprise sphere.

From the above, it is clear that the verbal conflict between the requirement of today for centralization and the decentralization of decisionmaking regarding international specialization and coproduction is only apparent. It is precisely within the framework of the concept-created central organs that the enterprises can act with a great degree of independence in such a way that their partial interests would be in harmony with the interests of all of society. The problem, therefore, lies more in a clear outlining of the jurisdictions of the individual levels of management.

Decisions by the economic center regarding specialization and coproduction are facilitated by the given approval mechanism. Its inadequate informational quality and cumbersome nature can act as a brake on international coproduction agreements. In this area, there is a need, on the one hand, to perfect the methods of evaluating economic efficiency pertaining to individual acts of specialization and coproduction in CEMA and, on the other hand, to provide the actual approving management with more spring. Methods must be perfected not only as far as the comprehensive nature of recording the profits from specialized measures, their connection with the system of indicators for evaluating their fulfillment, etc. The operational nature of approval management can be assured only through the differentiated limitations imposed upon its extent, differentiation according to the importance of appropriate measures to the national economy as a whole, but also with respect to those production processes where the equality of the effects of all-societal and partial criteria (services, consumer industry, etc.) can be anticipated.

#### Using Evaluative Instruments More Effectively

In the subsequent development of specialization and coproduction (particularly with respect to increasing their efficiency) a new role must be played by international evaluative instruments. These are primarily prices and foreign exchange financial instruments.

The practice for setting prices for specialized production is based on the same principles as the formation of contract prices for other unspecialized products and services involved in mutual trade. This means that they are formed on the basis of world prices for comparable products "purged" of the influence of competition. Although the method by which this purging is accomplished has undergone certain changes over the past years, such prices continue to express developments in world capitalistic markets. They are relatively foreign to the socialist market. That is why they cannot underestimate the creation of the desirable production-consumer structures within the framework of CEMA. Because they are (without regard to the purging aspects) prices of the past and prices which were formed by the uncontrolled market, their future developments can only be estimated in a very uncertain manner. This does not fully permit the development of an integrating mechanism to assure high efficiency and debases the informational function of prices pertaining to specialized and coproduced products for the producer.

Furthermore, the formation of prices for specialized products encounters difficulties based in the fact that some of them (particularly component parts, subassembly and components of final products) are not the subjects of international transactions in capitalist countries. The socialist countries are

making efforts to form their prices on the basis of production costs, the computation of which is substantially different in various countries. Unrealistically set contract prices and their unfavorable impact on the management of enterprises and economic effects based on cooperation then become one of the factors which impede international specialization and coproduction within CEMA. In some instances, they lead to creation of anti-import type production, for which, for the most part, optimum capacities do not exist.

The shortcomings of the present system of contract prices, together with the difficulties involved in utilizing foreign exchange financial instruments led to the violation of the function of money in CEMA (transferable rubles) and to the subsequent deformation in the markets of the CEMA countries. They include, for example, the tendency to inject payments in kind for the transactions, the tendency toward maintaining strict bilateral balancing with respect to mutual economic ties, to requirements to balance the intrasectoral transactions even within the framework of individual agreements and treaties covering specialization and coproduction (due to difficulties in utilizing an active balance of payments). Additional deformations are caused by tension in payment balances between socialist countries and developed capitalist nations. Products which are capable of fulfilling the function of payments in capitalist markets are also considered as "hard components" in the socialist market and are only exchanged for similarly "hard" goods or even "hard" currency. Naturally, the interest in accepting long-term commitments for delivery of such products to socialist nations is weak.

If a substantial change cannot be anticipated in the near future which would solve the formation of contract prices on the basis of socialist market conditions, then it is necessary to continue using the influence of "foreign" (world) prices. Through their appropriate utilization in economic indicators and instruments of national management systems, it is possible to permanently stimulate producers toward achieving higher quality, technical, and esthetic parameters for their products while maintaining maximum economy measures.

The correct setting of world prices, the rendering of domestic wholesale prices in a more realistic light, and the objectivization of conversion rates is also a basic prerequisite for increasing the declaratory capability of the previously mentioned indicators and methods utilized in calculating economic efficiency with respect to various types of specialization and coproduction activities within CEMA.

#### Problems Encountered in Fulfilling Programs

One of the fundamental directions for increasing the effectivity of international management pertaining to specialization and coproduction within CEMA is the perfection of the creation of long-term forecasts and planning coordination.

Despite the fact that since the adoption of the Comprehensive Program (1971) more than 400 forecasts have been worked out within CEMA, and continue to be worked out, forecasting activity is, thus far, not completely systems organized. This is indicated particularly by the nature of the forecasts which

are inadequately mutual and lack the necessary tie-ins. Prognostication must continue to be understood not as a one-time operation, but as a continuous activity. The realistic nature of prognosticated results is directly dependent upon the information components which are not satisfactory. The problem orientation of joint prognostication must be more specifically aimed at solving questions having to do with specialization and coproduction. The results of forecasts should be reflected much more in national concepts for long-range and medium-range plans and, from their, be reflected in the coordination of national economic plans in CEMA countries.

An analysis of the functioning of the management system dealing with socialist economic integration indicates that long-term planning is precisely one of the weakest links. Attempts to coordinate long-term national plans encountered a lack of readiness on the part of planning organs and their subordinate components to prepare such plans. This shortcoming was partially overcome by the working out of long-range goal-oriented programs covering cooperation and long-term bilateral programs for specialization and coproduction. However, long-term goal-oriented programs are not directly based on national concepts of specialization, but, rather, arise as a result of the identification of the most important problems of the entire community. Tasks emanating from them are, thus, included in national plans only subsequently. Their realization can be a problem if, at the moment of their adoption, the internal possibilities of the appropriate national economy had not been adequately verified. This fact leads to great demands with respect to conceptual activities on the part of the national economic center. Experiences involving the fulfillment of long-term goal-oriented programs of cooperation also show that the impact of the various programs is far too broad: they are broken down into such details that they virtually cover the entire structure of the national economy.

The principle, which is only gradually being introduced into practice in CEMA, continues to call for the planning interconnection between the entire cycle science--research--production--utilization. While up to now one predominantly started from the side of utilization which then led to tasks for production and only subsequently to tasks for science and technology, there are current indications that the procedure has been reversed. Among others, this was reflected in the adoption of the Comprehensive Program of the Scientific-Technical Progress Among CEMA Member States Through the Year 2000. The program is the key in determining the principal directions of further development in international specialization and coproduction in the CEMA member countries. It will expressly influence national production structures.

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## SEMIANNUAL ECONOMIC PERFORMANCE REPORT 1986

## Czech Plan Fulfillment

Prague RUDE PRAVO in Czech 29 Jul 86 p 2

[Article attributed to the Czech Statistical Office: "Better Utilization of Resources Called for--Fulfillment of Volume Indicators; Material-Intensive and Energy-Intensive Nature of Economy Declining Slowly"]

[Text] Prague--The Czech Statistical Office has issued a report on the development of the national economy and the fulfillment of the state plan for the CSR during the first half of 1986. The report contains the following data:

This year the national economy has entered a phase for which the 17th Congress of the CPCZ established the policy of accelerating socioeconomic developments by means of universal intensification. The goal is to secure a higher formation of the national income through increased efficiency and output in the economy. Specifically, this means a further significant lowering of the requirements for materials, raw materials, and energy, the more rapid growth of labor productivity, and an increase in the technical level, quality, and competitiveness of our products.

The results of economic development in the CSR for the first half of this year show that, in general, the volumetric indicators pertaining to the creation of resources are being successfully fulfilled. However, deviations from the state plan arise with respect to the structure of utilization pertaining to the created resources and, primarily, qualitative indicators are not being assured according to plan. Reductions in the material-intensive and energy-intensive nature of production are not being achieved as planned, neither are increases in the technical and quality levels of products and the utilization of supplies.

For the remaining part of the year, specific measures throughout the management sphere have been adopted in the interest of equalizing the shortfalls of the first half and to secure the annual tasks of the state plan and the development of worker initiative is being aimed in that direction.

The conclusions of the 17th Congress of the CPCZ stressed the extent of utilization of scientific-technical development as the fundamental factor of intensification.



Organizations on the territory of the Czech Socialist Republic solved 224 research and developmental tasks within the framework of the state plan of technical development during the first half of 1986, 96.4 percent of which were fulfilled in harmony with planned target dates and technical-economic parameters. In production and utilization some 470 practical results of research and development were realized--that is to say, 64.5 percent of the annual plan.

For example, during the first half of the year, production of insulation foil for water construction projects was introduced at the Fatra Napajedla National Enterprise; the production of unified hand tools was concentrated and automated at the Naradi Enterprise in Prague, and the production of combustion engines, including all accessories and adjustments which guarantee the attainment of goal-oriented values pertaining to fuel consumption and emissions, was initiated at the AZNP Enterprise in Mlada Boleslav.

In industries located on the territory of the CSR the share of new products in the overall value of goods produced rose from 17.3 percent in the first half of 1985 to 17.5 percent. The share of products in quality category I and technically progressive products in overall production of goods of a verified quality increased from 36.4 percent to 36.8 percent.

On the basis of successfully solved and introduced research tasks industrial enterprises in the CSR saved 101,000 tons of standard fuel and saved raw materials and materials valued at Kcs 656 million during the first half of 1986. As a result of these savings profits shown by these enterprises rose by Kcs 1.298 million.

In comparison with the first half of 1985 the number of submitted applications pertaining to improvement proposals rose by 2.1 percent and the number of inventions increased by 1.6 percent.

The achieved results correspond to the level of benefits obtained through realization of scientific-technical development of past years, but, thus far, have failed to reach the level required for the 8th Five-Year Plan.

The semiannual plan for industrial production was fulfilled 100.6 percent by centrally managed industries in the CSR. In comparison with the first half of last year the volume of production rose by 2.6 percent. The most rapid development was experienced by production in the electrotechnical industry, in the general engineering industry, and production in the health sector. Industries controlled by the government of the CSR fulfilled the plan 100.4 percent in comparison with the same period of last year, this represents an increase of 1.8 percent. A number of enterprises failed to fulfill their plans; in the CSR they amounted to 24.2 percent of the overall number of enterprises and 20.8 percent of enterprises managed by the government of the CSR.

The planned tasks for sales of industrial production were exceeded with respect to industries controlled by the government of the CSR. Industries managed by the government of the CSR exceeded their planned deliveries to the domestic market in retail prices by 1.0 percent and, in comparison with the first

half of last year, deliveries rose by 1.2 percent. Planned deliveries for export to socialist countries in prices which include all charges prepaid to the Czechoslovak border were exceeded by 6.1 percent; for exports to nonsocialist countries, in prices quoted as "all charges paid," they were exceeded by 3.4 percent.

The semiannual plan of adjusted outputs with respect to centrally managed industries in the CSR fell short by 0.3 percent, in industries managed by the government of the CSR the shortfall was 2.1 percent. This occurred primarily because planned reductions in the material-intensive nature of production are not being met.

The individual industrial branches managed by the government of the CSR achieved the following results:

Chemical industry--planned tasks were fulfilled 100.0 percent and the volume of production rose by 1.4 percent compared to the first half of last year. The production of plastics rose by 4.0 percent, that of phosphorus fertilizers by 6.6 percent, production of synthetic rubber rose by 5.0 percent, and production of automotive fuel rose by 4.8 percent.

Wood processing industry--the semiannual plan was exceeded by 0.3 percent and, in comparison with the first half of last year, production rose by 4.7 percent. Particular increases were experienced in the production of deciduous lumber by 9.7 percent and newsprint by 5.2 percent; production of coniferous lumber declined by 0.7 percent and production of fiberboard declined by 1.9 percent.

Light industry--the semiannual plan was fulfilled 100.0 percent and the volume of production, compared to the first half of 1985, rose by 2.0 percent. In the textile industry production increased by 2.5 percent; that of the clothing industry by 2.3 percent; production in the glass, porcelain, and ceramics industry rose by 1.3 percent; production in the leatherworking, footwear, and fur industry rose by 1.2 percent. The planned volume of health production was not fulfilled by 0.6 percent; compared to the first half of last year production rose by 5.3 percent.

Building materials industry--the semiannual plan was fulfilled 101.1 percent and, compared with the same period of last year, production rose by 2.2 percent. For example, the production of fired masonry products rose by 7.5 percent, that of ceramic tile by 4.3 percent, and production of cement rose by 1.5 percent.

The agricultural and foodstuffs complex--the timely execution of spring field work created good conditions for the harvest. Thinning of sugar beet was concluded in the first 10 days of June and the first cutting of perennial fodder plants on arable land was completed by the end of June. In comparison with last year the overall area planted to crops decreased by 0.4 percent. Areas planted to fodder crops increased while areas planted to legumes, grains, sugar beet, and potatoes decreased. In livestock production, compared to last year, the utility of the majority of the types of domestic animals increased

and the bulk buying plan for livestock products was exceeded. The time plan for purchasing slaughter animals (excluding poultry) was fulfilled 102.1 percent, the plan for purchasing slaughter poultry was fulfilled 104.3 percent, the milk purchase plan was fulfilled 101.7 percent, and the plan for the purchase of eggs 101.6 percent.

The semiannual plan of production in the foodstuffs industry was fulfilled 101.1 percent and, in comparison with the same period of last year, production rose by 1 percent. The production of rendered lard, for example, increased (by 5.3 percent) as did the production of dairy butter (3.2 percent).

Forestry industry--the semiannual timber extraction plan was fulfilled 102.8 percent and some 7,036,000 m<sup>3</sup> of timber were extracted. Compared to the first half of last year extraction declined by 6.2 percent; the extent to which fallen timber was processed was expressly lower. A total of 26,600 hectares of land were reforested, that is to say, 81.6 percent of the annual task and 2.5 percent less than was the case during the first half of 1985.

Deliveries of potable water to direct consumers (430 million m<sup>3</sup>) were 3 percent higher than was the case during the first half of last year. The number of inhabitants supplied with drinking water by public water distribution systems rose to 79.8 percent of the total number of inhabitants of the CSR. Sewers removed 408 million m<sup>3</sup> of wastewater; the share of wastewaters which were cleaned rose to 71.1 percent. Houses which were hooked up to the public sewer system were occupied by 70.7 percent of the inhabitants of the CSR.

Construction enterprises--construction enterprises headquartered in the CSR completed the plan of construction production during the first half of 1986 and during the second quarter of 1986 and exceeded the semiannual plan by 0.3 percent. Enterprises under the jurisdiction of the Ministry of Construction of the CSR fulfilled their semiannual plan 100.4 percent; enterprises under the Ministry of Agriculture and Food and the Silnice National Enterprise fulfilled their plans 100.9 percent; okres construction enterprises fulfilled their plans 99.5 percent. The semiannual plan for construction work was not fulfilled in the CSR by fewer enterprises than was the case in the first half of last year. Overall, the volume of construction work performed by employees of enterprises themselves was valued at Kcs 30.5 billion, that is to say, 2.5 percent more than was the case in the first half of last year. A continuing failure is the inability to provide the planned number of workers for construction projects.

Railroad loadings--the semiannual plan was exceeded by 0.1 percent. In comparison to the first half of the year the volume of loadings increased by 2.5 percent. Planned loadings tasks remained unfulfilled particularly with respect to solid fuels and construction materials; the tasks were exceeded with respect to mineral raw materials, ores, metallurgical, and engineering products. As a result of frequent repairs to railroad facilities and because of the uneven nature of transportation requirements the fulfillment of qualitative indicators deteriorated--something which was manifested particularly in the exceeding of the planned turnaround time with respect to railroad freight cars by 1 percent.

CSAD freight transportation--CSAD highway freight transportation moved 111 million tons of freight, that is to say, 1.7 percent more than was the case during the first half of last year. With respect to passenger transportation the CSAD Enterprise moved 1.3 percent more passengers.

River transportation--the planned volume of river transportation was not fulfilled by 0.5 percent; however, in comparison with the first half of last year it increased 2.3 percent. The smoothness of transportation operations was disrupted, particularly by the fact that the Labe River froze over in February.

Municipal mass transportation--in this area the plan for transporting passengers was exceeded by 2.3 percent. In comparison with the first half of 1985 some 45.6 million more persons (3.6 percent) were transported.

Capital construction--in the national economy of the CSR planned capital construction (excluding private construction and community self-improvement programs under Project "Z") accounted for capital construction deliveries valued at Kcs 42.3 billion, that is to say, 42.0 percent of the annual plan. Last year the share of this work done during the first half accounted for 39.1 percent of the annual volume.

With respect to the more significant capacities which were activated during the first half of 1986 in the CSR there was, for example, the second block of the nuclear power plant at Dukovany, the production of fired masonry materials at the construction site of the Krytina Plant at Slapanice, and production of NCR [no carbon required] paper at the Krkonose Paper Mill at Hostinne.

Constantly more attention is being devoted to the protection and creation of the environment and a number of projects are aimed at improving it. With respect to the purity of water these are cleaning facilities for wastewater at Havlickuv Brod, Sezimov Usti, Marianske Lazne, Chrudim, Hodonin, and in a number of other cities. In the interest of clean air a number of reconstruction projects involve the heat distribution network and thermal facilities, the gasification of boiler plants, and other projects, for example, the desulfurization of the products of combustion at the power plant in Tusimice. To eliminate wastes an enterprise for the processing of domestic waste will be operating at Ostrava Kuncice. Improvements of environmental conditions in cities and communities can be attributed to a significant extent to the effects of community self-improvement programs, particularly the construction of small sewerage treatment plants.

All forms of housing construction accounted for completion of 15,196 apartments, that is to say, not quite one-third of the annual plan. Forty-two percent of the annual plan for work involving the provision of modern conveniences was fulfilled, as were 45.0 percent of the work pertaining to public facilities. It has thus far not been possible to eliminate the irregularity noted in the fulfillment of tasks pertaining to housing construction.

The increased initiative on the part of citizens prior to the 17th Congress of the CPCZ and during the period of the elections to representative offices

exerted a favorable influence upon the fulfillment of tasks in Project "Z." A total of almost 130 million hours were worked free of charge and material values of Kcs 2.5 billion were created.

The income of CSR citizens rose by Kcs 3.9 billion compared to the first half of last year, that is to say, by 2.8 percent. The average monthly wage of a worker in the socialist sector of the national economy of the CSR reached a level of Kcs 2,876 and, in comparison with the first half of last year, was higher by 40 Kcs (1.4 percent). Savings by citizens in the Czech State Savings Bank increased by Kcs 4.9 billion during the first half of the year, that is to say, by 3.3 percent. Total savings by the end of the first half were Kcs 155.5 billion, that is to say, the average savings per citizen in the CSR were Kcs 15,028.

Cumulative social security payments, in comparison to the first half of 1985, increased by Kcs 1.1 billion, that is to say, by 4.2 percent. Pension payments amounted to Kcs 19.2 billion and health insurance payments amounts to Kcs 10.9 billion. Supplemental payments for children amounted to Kcs 5.2 billion, that is to say, 1.1 percent more than was the case during the first half of 1985.

Retail trade pertaining to the principal commercial systems attained a level of Kcs 80.3 billion and was 2.3 percent higher than was the case during the first half of 1985. The semiannual plan was fulfilled by all principal systems at a level of 100.4 percent and the commercial network fulfilled its plan 100.3 percent; public catering fulfilled its plan 100.9 percent. The greatest volume in excess of the turnover plan was achieved by the Uhelne Sklady Enterprise (103.0 percent). Of the organizations of the Ministry of Trade, the food stores (Potravinarsky obchod), the textile and clothing stores (Textil a Odevy) failed to fulfill the semiannual plan; the largest plan surplus (3.2 percent) was achieved by the jewelry stores (Klenoty), by the Prior Department Stores (by 2.3 percent), and by the Drogerie Drug Stores (2.1 percent).

Enterprises of local production and services as well as production associations expanded the types of services offered to the populace. The overall volume of services to the population increased by more than 5 percent compared to the first half of last year. With respect to the individual areas of work and services the largest growth was experienced by outputs involving repair and maintenance of an industrial nature (by 5.9 percent), even though the situation with respect to these services was complicated by a continuing shortage of some spare parts. The volume of personal services increased by almost 4 percent.

By 30 June 1986 the CSR had 10,345,000 inhabitants.

## Slovak Plan Fulfillment

Bratislava PRAVDA in Slovak 29 Jul 86 pp 1, 3

[Article attributed to the Slovak Statistical Office: "The Need to Clearly Orient Toward the Qualitative Side of Production"]

[Text] The main tasks and goals of the state implementation plan for the SSR for the year 1986 are generally being fulfilled. During the first half of this year production in the basic production sectors increased, productivity of labor rose, as did the utilization of raw materials, materials, and energy, better results are being seen in the fulfillment of quantitative as well as qualitative plan indicators.

Economic development has been favorably influenced by the initiative and activity of the working people during the preparations and course of the 17th Congress of the CPCZ, the Congress of the Slovak Communist Party, and during the elections to representative offices at all levels. The number of workers increased, their qualification levels rose, and the development of the material-technical base continued.

Despite the predominantly positive character of plan fulfillment, the fulfillment of its tasks at the level of sectors, enterprises, and lower organizational levels was accomplished in a differentiated manner, the quality and assortment of products did not fully correspond to the demanding requirements of consumers, and the viewpoints of efficiency and economy were slower in their implementation than had been planned.

The volume of industrial production and the volume of construction work, in comparison with the annual state plan, was increasing at a most rapid pace. In conjunction with the intentions of the plan the volume of adjusted outputs and production rose more rapidly. However, one-quarter of the industrial and construction enterprises lagged behind the tasks set by the time plan. In agriculture roughly the same amount of land was planted to basic crops as had been the case last year. With respect to the principal groups of products, the plan for bulk buying of livestock products was fulfilled; with respect to the structure of slaughter animals, however, the tasks involved in the purchasing of hogs were not fulfilled.

In comparison with the first half of last year the volume of first-quality products and technically advanced products rose; planned tasks in the area of technical development are, for the time being, not being completely fulfilled.

The realized volume of capital construction and deliveries (excluding community self-improvement projects and private construction) was greater than during the first half of last year; however, a number of substantive tasks, particularly with respect to finishing construction projects and with respect to the activation of production capacities, were not fulfilled.

Labor productivity based on adjusted outputs increased in industry and in the construction industry more rapidly than the planned annual growth rate. Compared to the first half of last year the volume of profits increased although

a lower share than was the case in previous years was realized on the basis of annual tasks. For the time being the planned decrease in the consumption of materials and financial resources, as set by the state plan, has not been achieved.

The growth in personal and community consumption worked to assure the intentions of the plan established with respect to the level of the standard of living. In general, a smooth supplying of the domestic market was achieved; consumer requirements have not yet fully been fulfilled with respect to the structure of the available assortment of products, particularly with respect to industrial products. While the value of paid services increased, the requirements of the populace, particularly with respect to deadlines and quality, were not met.

This indicates that the fulfillment of the state plan for 1986 will require that, during the second half of the year, efforts intended to increase efficiency of economy be increased and that stated goals be realized in a more balanced manner.

#### Scientific-Technical Development

Solutions of research and developmental tasks contributed to the growth of the efficiency of the economy, led to savings in fuels, energy, and materials, resulted in the rationalization of production processes. The technical-economic level of products improved and new products with better utility characteristics were introduced in production.

Planned intentions in applying the results of scientific-technical development are not being realized to their full extent. Measures adopted to accelerate realization of the results of science and research in practice are being implemented slowly.

Of a total of 113 research and development tasks included in the state plan for technical development some 106, that is to say, 93.8 percent, were being solved in harmony with the plan. The tasks are aimed at state goal-oriented and scientific and technical programs, as well as at increasing the safety of operations, at health care, and research directed at pharmaceuticals, etc.

Some 90.7 percent of the planned number of realizational outputs were introduced into production. On their basis production was initiated, for example, with respect to the following: transistors in plastic covers, new types of laminates for communications, concrete with increased corrosion resistance characteristics to combat corrosive waters, cultivating machines for agricultural purposes, yeast fodders manufactured in a model installation.

Some 139 industrial robots and manipulators were produced and their introduction in production will result in manpower savings, primarily in physically demanding processes and in processes which are detrimental to health.

In comparison with the first half of 1985 the share of products having a high technical-economic level in total product production rose from 16.8 percent to

18.4 percent. Some 16.1 percent of all products were categorized as being in quality grade I. The volume of production pertaining to technically progressive products also rose; these products included an unloading crane with a grabber arm and the Model P-II crane in the Siberian version for export to the USSR, oils with a low viscosity, the RS-1-C management system, the small Model 45 magnetic tape, and several other products.

In the area of innovation tasks are being accomplished at a slower pace than planned. The share of new products in overall product production reached 15.8 percent, which is less than was the case for the same period of last year.

The technical creative initiative of the working public was oriented toward the requirements of production and toward tasks involved in the plan of scientific-technical development. The number of inventions registered increased by 1.9 percent over last year; the number of improvement suggestions increased by 2.3 percent; the benefits based on utilized inventions and improvement suggestions also increased. Reserves still exist with respect to realization of inventions and improvements; less than one-third of all inventions registered and only one-half of the improvement suggestions submitted were being utilized.

Scientific research organizations and enterprises in the SSR shared in the intensification of scientific-technical cooperation with the USSR and with the other CEMA countries and cooperated in working out the Comprehensive Program of Scientific-Technical Progress Among CEMA Countries Through the Year 2000.

#### Industry

In centrally planned industries the volume of product deliveries rose by 3.5 percent, including an increase in finished products of 3.7 percent. Deliveries of machines and installations for capital purposes rose by 15.5 percent; deliveries of products to the domestic trade network rose by 4.0 percent and products for export to socialist countries rose by 5.3 percent. The irregular pace of fulfillment of tasks by enterprises and the slow adaptation to consumer requirements exerted an unfavorable influence on the smooth development of supplier/consumer relationships.

In comparison with the first half of last year the volume of adjusted outputs increased by 8.3 percent and the timeliness plan for these outputs was exceeded by 0.5 percent. Some 48.5 percent of the tasks planned for the year were realized.

In comparison with the same period of last year industrial production rose by 4.1 percent, which represents a more rapid growth in comparison to the state plan by 0.8 point. Of the annual state plan 49.8 percent of the tasks were realized. Plans for the first half of the year were realized. Plans for the first half of the year were exceeded cumulatively by 0.7 percent. However, irregularity with respect to task fulfillment persists; one-fourth of the industrial enterprises failed to fulfill their gross production plan.

The dynamics of production growth in individual industrial branches progressed at a differentiated rate; while the realization of structural changes continued, a faster pace of development was recorded for progressive products which



were less energy-intensive and less demanding of raw materials, as well as products based on applying the results of scientific-technical development. The largest increments occurred in the electrotechnical industry and in the engineering industry.

During the first half of 1986 the following results were achieved in the individual branches of industry shown below:

Fuels industry--2,628,000 tons of brown coal and lignite were extracted, representing 49.3 percent of the annual plan. With an extraction volume of 214 million m<sup>3</sup> the timeliness plan for natural gas extraction was fulfilled 100.8 percent. The requirements of the national economy and the populace with respect to fuels were met.

Electric energy--production rose by 10.2 percent. In comparison with the same period of last year the share of electric energy produced in nuclear power plants rose to 48.7 percent, which made it possible to reduce production in steam electric power plants by 7.5 percent. Supplies of electric energy to the national economy and to the populace were, generally, smooth. Consumption of electric energy by large-scale users increased by 3.9 percent and small-scale consumers consumed 1.3 percent more electric energy.

Metallurgy, including ore mining--overall production increased by 6.0 percent. This resulted in the creation of prerequisites for the smooth production of finished products during repair periods of metallurgical aggregates. The production of pig iron increased by 5.5 percent, that of raw steel by 5.4 percent. With respect to the total production of steel progressive technology involving continuous casting resulted in the production of almost 480,000 tons, which, in turn, resulted in savings of 53,000 tons of ferrous metals and more than 50,000 tons of standard fuel.

Engineering--production rose by 6.8 percent, which is 0.7 point more than stipulated by the state plan and the total share of engineering production in overall industrial production amounted to 27.8 percent. The plan for deliveries of engineering products was exceeded with respect to all finished product sales. The largest increment was recorded with respect to deliveries to the domestic market and for capital construction. The consumption of ferrous metals in the engineering industry declined by 13,000 tons in comparison to the first half of 1985, that is to say, by 2.6 percent.

Within the framework of the engineering complex production in the heavy engineering industry rose more rapidly; this branch of the engineering industry exceeded the tasks of the annual state plan by 5.2 percent through its 11.4-percent growth rate. Higher increments were achieved with respect to the production of industrial boilers, rolling stock, steam turbines, presses, and cranes.

General engineering--production rose by 5.4 percent, the state plan specifies an increase of 5.2 percent. Production of cargo trucks rose by 18.6 percent; that of machines and installations for agriculture by 27.5 percent; that of textile machines 11.0 percent; machines for earth work, construction, and road

work by 12 percent; tractors by 8.3 percent; and metal-forming machines by 5.6 percent. With respect to consumer goods a higher rate of increase was experienced in the production of electric stoves, automatic washing machines, refrigerators, and freezers for household use.

Electrotechnical industry--by increasing production by 9.8 percent (the state plan specified an increase of 9.6 percent) conditions were created for the electrification of the national economy, the enrichment of the domestic market by the addition of new and innovative consumer products. The production of calculators rose by 13.5 percent, that of health care products by 4.9 percent. The production of some consumer electronic products developed more rapidly, particularly production of television sets for color reception, the production of which rose 22.4 percent. Production in this industry was focused on deliveries for capital construction and for the domestic market.

Chemical industry--the annual plan for the state specified a production increase of 3.1 percent. Production in the branch, in harmony with its capacities, material reserves, and other possibilities, increased by 1.8 percent. Production of plant protection agents grew particularly by 18.3 percent, that of nitrogen fertilizers by 26.2 percent, and automobile tires by 7.5 percent. The volume of deliveries of chemical products to the domestic market rose by 8.5 percent, products for export to socialist countries rose by as much as 23.1 percent. The increment with respect to pharmaceutical products reached 3.1 percent.

Wood processing industry--production increased by 4.0 percent, whereas the state plan specified a growth of 2.7 percent. Final deliveries to the populace grew more rapidly than gross production. The time plan for deliveries to the domestic market was exceeded and export tasks were not fulfilled. Increasing product quality and improving product adaptability to requirements, the attainment of planned parameters, and the assurance of production with the addition of new capacities remain a pressing task for the entire wood processing industry.

Light industry--production rose by 3.7 percent (the state plan specified 4.4 percent), including a rise in the glass industry by 3.2 percent, in the textile industry by 3.9 percent, in the clothing industry by 3.9 percent, in the fur and footwear industry by 3.5 percent, and in the polygraphic industry by 3.4 percent. With exception of the glass industry the plan for deliveries to the domestic market was fulfilled. Compared to last year, deliveries from the textile and fur and footwear industries grew the most.

Construction materials industry--development here assured the needs of the national economy while limiting the production of energy-intensive products. Production rose by 2.0 percent and this is a higher rate of growth than stipulated by the state plan. The production of reinforced-concrete pipe increased by more than one-fourth, that of ceramic tile by 5.5 percent. In conjunction with the plan production of cement declined by 4.7 percent and that of masonry materials by 1.7 percent.

The efficiency of industrial production is not being increased to the planned extent. The share of overall costs per Kcs 1 of output in centrally planned industries declined, in comparison to the same period of last year, by 1.22 hellers and the share of material expenditures declined by 0.95 heller, which is less than specified by the annual plan. Productivity with respect to adjusted outputs rose by 6.9 percent and shared in the increase in adjusted outputs to the extent of 85.5 percent. Productivity with respect to gross production increased by 2.5 percent and accounted for 70 percent of the growth in gross production. The profitability of capital assets and costs grew slightly. While the time plan for profits was being fulfilled its share in the annual tasks was lower than in previous years. Within the framework of initiatives sponsored by the Central Council of Trade Unions productivity increased by 1 percent in 98 enterprises and 79 enterprises achieved 0.5 percent of savings with respect to materials and other expenditures compared to plan targets.

Centrally planned industries employed 746,200 persons, which was 1.2 percent more than during the first half of 1985. Average monthly wages for workers in centrally planned industries were Kcs 2,994, an increase of 1.7 percent over the first half of 1985.

Utilization of 90.3 percent of available working time by workers declined by 0.9 percent compared to last year, primarily as a result of increasing absence due to sickness, which rose from 6.0 percent to 6.7 percent. In this connection overtime work performed by workers increased slightly to 5.0 percent.

The utilization of capital assets, measured in terms of a shift work index of 1.415, remained at last year's level; the shift work index with respect to machine work stations rose slightly to 1.636.

#### Agriculture and Foodstuffs Industry

Spring field work was accomplished in a shorter time than was the case last year with improved organization and material preparedness. Stands of winter wheat and rape wintered relatively well and that is why less of these crops were plowed under than was the case last year. Seeding was done on 1,538,900 hectares which, compared to last year, is 3,000 hectares more. Compared with last year the area which was not seeded or planted was smaller by half. With respect to basic crops more wheat, rice, corn, legumes, vegetables, and annual fodders were planted than called for by the plan. Area targets for the planting of barley were not fulfilled, and the target for seeding grains in general was not met, neither was the target for planting potatoes, oleaginous plants, sugar beet, and perennial fodders.

By 24 July 60 percent of the grain crop was harvested. Long-lasting high temperatures and a shortage of moisture exerted an unfavorable influence on the yield of dense stands of grain crops in the southern portions of Slovakia.

In the socialist sector, in comparison with the stocks at the end of the first half of last year, the number of beef cattle declined by 17,600 head, the number of sheep by 4,400 head, and poultry declined by 269,000. The number of cows rose slightly and the number of hogs rose by 81,800 head. Despite the decline in the number of animals the semiannual goals for bulk buying were met.

With respect to the majority of indicators of utility involving domestic animals better results were achieved than was the case during the first half of last year while adhering to the standards set for consumption of fodder per unit of production. The average cow yielded more than 2 percent more milk, the average chicken produced 0.8 percent more eggs. Also, the growth increment with respect to beef cattle being fed increased by 4.3 percent and that for hogs by 2.8 percent. The intensity of weaning suckling pigs increased insignificantly; the intensity of weaning calves and lambs declined.

The goals of the timeliness plan for the purchase of livestock products during the first half of the year were met with respect to the principal groups of products. In comparison with the plan 1.4 percent more slaughter animals were purchased, 1.3 percent more slaughter poultry, 1.0 percent more milk, and 1.9 percent more consumer eggs. The purchase goal for slaughter hogs was not fulfilled by 2.4 percent as a result of the lower numbers of hogs in existence at the beginning of the year.

The volume of production in the foodstuffs industry rose by 0.4 percent in comparison with the same period of last year and the plan was slightly exceeded. The production of edible plant fats and oils rose, as did the production of canned meat, cheese, dairy butter, baked goods, and other products. Compared to the first half of last year the production of slaughter poultry declined, as did that of pasteurized milk and consumer syrups. Deliveries to the domestic market, measured in terms of retail prices, increased by 2.7 percent in comparison to last year.

#### Forestry

In addition to concerns for reforesting unutilized areas, increased attention was devoted to processing timber resulting from natural disasters. During the first half of the year 15,300 hectares were reforested, that is to say, 83.6 percent of the annual plan. Some 2,968,000 m<sup>3</sup> of lumber were extracted, accounting for 53.0 percent of the annual plan. Of the volume of extracted lumber 837,000 m<sup>3</sup> resulted from natural disasters and 749,000 m<sup>3</sup> of this kind of timber remains to be processed.

#### Water Management

Water management organizations delivered some 211 million m<sup>3</sup> of potable water to consumers. The share of the populace supplied with water from public water distribution systems increased from 69.0 percent to 70.1 percent and the share of the populace living in households connected to the public sewer system rose from 45.3 percent to 46.8 percent. Of the total quantity of 228 million m<sup>3</sup> of wastewaters released into the public sewage system 72.4 percent was cleaned.

#### Construction Industry

The volume of construction work executed by enterprises with their own forces was commensurate with the time plan. The value of production reached Kcs 16 billion, which is 5.1 percent more than was the case during the same period last year. Some 46.8 percent of the annual state plan was accomplished. The

plan for the first half year was not fulfilled by 25 percent of the enterprises with a shortfall of Kcs 127 million.

Construction work accomplished as a result of supplier contracts valued at Kcs 15.5 billion exceeded the time plan by 1.3 percent, primarily because more time than had been planned was consumed by the volume of repair work. Some Kcs 11.7 billion, that is to say, 99.3 percent of the time plan and 44.0 percent of the annual plan were realized with respect to capital construction. Some 37 enterprises fell behind with respect to the volume of construction work stipulated by the plan for the first half by Kcs 406 million. Problems arose mostly with respect to the realization of work on comprehensive housing construction projects and with respect to assuring the planned progress of work on some construction projects. In shifting construction capacities to locations of concentrated construction, that is to say, to the capital city of the CSSR, Prague, and to the North Bohemia Kraj, planned goals were exceeded; work on construction projects in the capital city of the SSR, Bratislava, progressed at a slower rate.

Adjusted outputs for the first half of the year reached a value of Kcs 6.2 billion, which is 1.5 percent more than the time plan stipulated. With respect to annual economic plans 46.9 percent of the goals were fulfilled. In comparison with the first half of last year adjusted outputs increased by Kcs 615 million, that is to say, by 11.0 percent.

The share of expenditures per Kcs 1 of output declined, mostly as a result of influence of the lower share of material consumption. However, the planned intentions with respect to lowering the wage-intensive nature of the economy have not yet been achieved. Profit, as well as its share in the annual planned goals, was higher than was the case during the first half of last year.

As far as productivity in basic construction output is concerned, as well as adjusted outputs, the levels stipulated by the time plan were fulfilled and grew more rapidly than was stipulated by the annual plan. In comparison with the first half of last year productivity of basic construction production rose by 4.1 percent and shared in the increment of construction production volume to the extent of 80.4 percent; productivity of labor with respect to adjusted outputs grew by 10.0 percent and shared in their increase to the extent of 90.9 percent.

Average monthly wages of workers reached Kcs 3,023 and, in comparison with the same period of last year, were higher by 2.2 percent.

Tasks in the construction industry were accomplished with a lower number of workers than planned. On average the industry employed 200,600 workers, which is 0.9 percent more than was the case in the same period of last year.

#### Communications and Transportation

Public freight transportation essentially assured the requirements of shippers and, in harmony with the plan, the share of railroad and water transportation increased within the framework of the division of labor. Some 120 million

tons of products were shipped, which was 3.1 percent more than last year. With respect to total transportation railroads accounted for 53 percent, highway transportation accounted for 44.9 percent, and water transportation accounted for 2.1 percent.

Railroad freight transportation increased the volume of products shipped compared to the first half of last year by 4.4 percent and its freight car loadings by 5.1 percent. Productivity in railroad traffic was higher compared to the plan as well as to last year; the average static weighting of freight cars did not attain the planned level. Average turnaround time per car unit increased to 2.75 days in comparison to figures called for by the plan, but decreased slightly in comparison to last year. In water transportation 23.4 percent more freight was shipped than was the case during the first half of last year and automotive freight transportation shipped 0.8 percent more products than was the case during the first half of last year. The consumption of motor fuels per unit of output declined slightly. Passenger transportation accomplished by the CSAD Enterprise moved 476 million persons, that is to say, 2.5 percent more than was the case last year.

In the area of communications the modernization of the transmission net and the automation of communications facilities continued. By the end of June some 1.03 million telephones were in operation; their numbers rose by 24,000, including an increase of 11,000 in apartments (in Bratislava the increase was 3,000).

#### Financial Management

Adjusted outputs in centrally managed state economic organizations in Slovakia increased by 6.5 percent compared to the same period of last year. Savings in material costs accounted for half of this increment, which is less than the rate set by the annual state plan.

The expenditures per Kcs 1 of output declined by 1.3 percent. The annual rate of decline in this indicator, which has been stipulated by the plan, was not achieved with respect to material consumption and with respect to financial costs. The volume of profit rose, although lower profits than last year were realized with respect to planned annual levels. The profitability of expenditures reached 10.4 percent and was higher than during the first half of last year.

#### Capital Construction

During the first half of the year capital construction and deliveries (excluding community self-improvement projects and private construction) were accomplished and valued at Kcs 21.4 billion, including construction work valued at Kcs 13 billion and machines and installations worth Kcs 8.4 billion. Of the annual state plan 41.0 percent was realized. As far as the structure of capital construction work and deliveries is concerned a higher share of construction work (42.7 percent) was realized than was the case with respect to machines and installations (38.6 percent).

Compared to the first half of 1985 the volume of capital construction and deliveries increased by 3.1 percent. The growth in investments was aimed primarily at the fuels industry, at light industry, agriculture, water management, education, and specific construction under the jurisdiction of national committees.

The realization of goals at important construction projects was unsatisfactory with the volume of work reaching 39.6 percent of the annual plan. The concentration of suppliers, including subcontractors, delivering technologies to assure deliveries of machinery and installations was inadequate.

Approximately 40 percent of the total number of construction projects recorded lower fulfillment of planned annual goals with respect to construction work or the technological portions of the projects. Of the more important projects construction lagged behind with respect to the following: Tesla Vrable--engineering enterprise; Vihorlat Snina--expansion of heat distribution plant; Slovnaft Bratislava--first phase of hydrofractionation column; Skloplast Trnava--reconstruction of fiberglass facility; reservoir and group water distribution system at Starina, second project.

Of four projects planned for trial operation during the first half of the year the deadline was met by the heat distribution plant at the MEZ Michalovce Project--mechanical assembly operations, phase I, and by the housing project at the nuclear power plant at Mochovce.

With respect to the modernization activities involving machines and installations not included in the budget of construction projects designated as important goals of the state plan only 34.7 percent of the share of annual goals was realized.

The achieved results in the reproduction of basic resources did not fully correspond to the demanding tasks of the state plan. The activation of capacities and the completion of construction projects which impacts on early introduction of basic assets into operation is unsatisfactory.

#### Standard of Living

During the first half of 1986 conditions were created for the better satisfaction of the requirements of the populace. Employment, in comparison with the same period of last year, rose by 29,000 and the labor force numbered 2,084,000 persons. The largest increment in the number of workers occurred in industry, trade, public catering, education, and in the health services.

In the first half of 1986 earnings reached a level of Kcs 64.2 billion and, in comparison with the same period of last year, were higher by 3.8 percent. Social incomes grew by 4.2 percent and income from wages by 2.8 percent.

The average monthly wage per worker in the socialist sector of the national economy (excluding the JRD's) reached Kcs 2,820, which represents an increase of 1.3 percent compared to the first half of 1985.

Monetary expenditures by the populace amounted to Kcs 59.9 billion and, in comparison with the first half of last year, increased by 3.3 percent. The higher rate of income over expenditures was manifested in an increasing growth of savings on the part of the population by Kcs 400 million.

In all systems retail turnover of Kcs 44.2 billion was realized. Compared to last year it rose by 3.6 percent, although the anticipated priority in the growth of industrial products over foodstuffs was not accomplished.

Supplying the populace with the majority of the basic foodstuffs was smooth. However, the demand for cheaper cuts of meat and meat products, of some types of meat specialties, of sour-milk products, and vegetable products was not fully met.

With respect to industrial products, and in comparison to last year, supplies of various types of products improved. Despite substantially higher deliveries the consumer demand was not satisfied with respect primarily to freezers, some types of refrigerators, color television sets, and tape recorders. An inadequate assortment structure failed to fully meet the demands of consumers with respect to several types of textile products and shoes.

Local production enterprises and service enterprises and production cooperatives expanded the network and assortment of their services. In comparison with previous years they achieved a more rapid development with the volume of reduced outputs and services expanding by more than 5 percent. A higher growth rate for sales based on paid services was achieved with respect to repair and maintenance of automobiles, electric appliances, and horticultural products. Although sales of construction activities increased, the requirements of the populace with respect to repairs and maintenance of housing were not satisfied. Also, in fulfilling the plan of basic indicators availability, delivery deadlines, and particularly the quality of paid services, continued to lag behind.

In housing construction 11,400 housing units, that is to say, 35.6 percent of the annual state plan, were completed. Irregularity, unsatisfactory quality of finishing work, and shortcomings with respect to assuring the comprehensive nature of apartment construction persisted. In apartment construction accomplished by supplier construction enterprises some 38.1 percent of the annual planned goals were achieved.

Of the total number of newly built apartments community work accounted for completing 2,100, 5,900 were completed through cooperative efforts, and 200 were completed through enterprise efforts; private construction of family houses resulted in 3,200 apartments. Construction of 13,600 apartment units was initiated.

The fulfillment of goals with respect to the modernization and reconstruction of the housing inventory was unsatisfactory. Of the annual plan only 6.3 percent of the projects were realized.



In nursery schools some 249,400 children were in preschool education, which represents 92.1 percent of the 3- through 5-year-old population. Basic schools provided education for 721,300 students. Secondary specialized training centers are preparing 138,300 students for worker professions, virtually one-fifth of whom are in an apprenticeship status which will conclude the maturity examination. Some 44,700 students attended day schools at the gymnasium level, 77,500 students attended specialized middle schools, and 49,200 students of Czech nationality attended advanced schools [in Slovakia?].

The number of beds in health service facilities increased by 480 in comparison to the first half of 1985 to 57,600. There was 1 physician per 281 inhabitants. The number of places in nursery schools increased to 49,800, of which 29.4 percent are places in enterprise day-care centers, including day-care centers of a cooperative nature.

Expenditures for social security increased. Some Kcs 7.7 billion were expended on pension payments and Kcs 5.7 billion for health insurance purposes. Allowances for children increased by 1.4 percent and health insurance by virtually 17 percent. Some 1,148,000 pensions were paid, including 576,000 old-age pensions.

In the area of the environment development of facilities intended to lower water and air pollution and to utilize or eliminate wastes continued. Twenty-nine major projects costing Kcs 1,784 million for the protection of drinking water resources and to clean wastewaters released into waterways, 3 projects costing Kcs 185 million for the protection of the air, and 9 projects costing Kcs 895 million for the utilization or elimination of waste products were initiated.

National committees supported and organized initiatives on the part of the populace in community self-improvement projects, which resulted in projects having an overall value of \$507.8 million; of this amount Kcs 81.1 million were devoted to educational projects and Kcs 76.7 million to physical training projects.

During the first half of 1986 there were 44,000 births, 28,000 individuals died. Some 18,000 marriages occurred. As of 30 June 1986 the population of Slovakia was 5,192,000.

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## IMPROVING MANAGEMENT IN FUELS, ENERGY BRANCHES

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[Article by Eng Karel Cadan, candidate of sciences, department head in the Federal Ministry of Fuels and Energy: "Perfecting the Economic System of Management in the Conditions Applicable to the Fuels and Energy Industry in the 8th Five-Year Plan"; first paragraph is HORNÍK A ENERGETIK introduction]

[Excerpts] The 17th Congress of the Communist Party of Czechoslovakia emphasized that further improvements with respect to the system of planned management pertaining to the national economy must expressly contribute toward fulfilling the goals of socioeconomic development, the implementation of intensification, and increasing the efficiency and quality of all work. The Set of Measures, valid during the preceding 5-year plan, is key to the 8th Five-Year Plan also. However, it is further deepened in the direction of creating conditions for the rapid application of science and technology and innovative activity, increasing the authority and responsibilities of the economic sphere in regard to capital construction, deepening material incentives involved with improving the quality of production and the efficiency of exports, lowering the level of wholesale prices, maintaining the relationship between the development of wages, the growth of productivity, and the results of economic activity, intensifying the cost-accounting[khozraschet] system, intra-enterprise management and control, effective economizing with supplies, and the planning of material values. Added to this is the vital need to improve the quality at all levels of direct management, as well as organizational work and the consistency of control.

What are the fundamental directions involved in improving the system of economic management in 1986?

The primary task is to assure an economic balance, both internal and external, and the dynamics of efficiency in the economy. The way toward this goal is primarily through the mobilization and evaluation of all existing material, capacity, manpower, foreign exchange, and financial resources, through accelerated application of scientific-technical progress, and through more intensive commitment of our economy to the international division of labor, particularly with respect to socialist economic integration.

Improving the system of management must begin with the consistent application of democratic centralism, which connects the unity of central management with initiative, with creative activity and high responsibility at all levels in the economy.

#### Basic Intentions of the 8th Five-Year Plan in the Fuels and Energy Complex

A growth in national income must be achieved primarily by lowering its energy-intensive components by 2.9 percent per year, by lowering its metals-intensive components, and, last but not least, by lowering its transport-intensive components during the course of the 8th Five-Year Plan by roughly 10 percent. The share of material costs in outputs is to be lowered each year by an average of 1.5 percent.

The principal tasks contained in the proposal for the 8th Five-Year Plan for the fuels and energy industry can be quantified as follows in a preliminary manner:

<u>Item</u>	<u>Unit of Measure</u>	<u>1985*</u>	<u>1990</u>	<u>Index</u>
Market extraction of coal	Mil t	126.6	118.8	93.8
Including:				
Bituminous coal	Mil t	26.2	25.0	95.4
Brown coal and lignite		100.4	93.8	93.4
Production of metallurgical coke	Mil t	2.9	2.8	96.6
Production of briquettes	Mil t	1.1	0.7	83.6
Production of electricity		70.1	76.8	109.6
Including:				
Steam	TWh	54.1	46.8	86.5
Nuclear	TWh	11.8	25.0	211.9
Hydroelectric power	TWh	4.2	5.0	119.0
Production of consumer heat	000 Tj	123.6	144.2	116.7
Production of illuminating gas	Bil m <sup>3</sup>	3.0	2.2	73.3
Extraction of natural gas	Bil m <sup>3</sup>	0.7	1.1	151.1
Extraction of crude petroleum and gasoline [sic]	000 t	123.0	150.0	122.0
Import of natural gas	Bil m <sup>3</sup>	9.9	14.2	143.4
Average monthly earnings	Kcs/ worker	3,998	4,243	106.1
Productivity of labor in terms of adjusted outputs	000 Kcs/ worker	168.3	174.4	103.6
Share of wages in each Kcs of adjusted outputs	%	28.72	29.39	102.3
Adjusted outputs	Bil Kcs	51.6	56.0	108.5
Status of average capital assets	Bil Kcs	288.8	384.9	133.3
Average status of reserves	Bil Kcs	14.7	14.8	100.7
Profits	Bil Kcs	18.2	16.5	90.7
Overall costs in outputs	%	81.21	84.00	103.4
Material costs in outputs	%	43.05	41.65	96.7
Profitability of production assets	%	6.00	4.12	68.7

\* Value indicators are listed in prices and methods applicable for 1986.

It is not the purpose of this article to analyze the proposed economic developments in the fuels and energy industry during the 8th Five-Year Plan. This will be the subject of another article. We only wish to characterize the demanding nature of the tasks involved and the effect exerted by the economic mechanism on them.

#### Decisive Changes in the System of Economic Management in the Fuels and Energy Industry in the 8th Five-Year Plan

Starting in 1986, organizations in the fuels and energy industry began applying the following measures of a more significant character:

##### a) In the Area of Planning

During the second half of this year, a definitive plan for the 8th Five-Year Plan period will be detailed and worked out by the economic sphere. The 5-year plan assigns organizations their national priorities, tasks, and limitations and will be augmented by the addition of further data, primarily by a set of standards which will express the relationship between covering of the organization's demands and the creation of appropriate resources. The following standards will be involved:

- i. standards for the creation of wage funds,
- ii. standards for the creation of investment funds from profits and depreciation,
- iii. standards for the creation of a fund for technical development,
- iv. standards for the creation of a reserve fund,
- v. standards determining the share of inventories to be funded from working capital.

The tasks and limits of the detailed plan for the 8th Five-Year Plan period applicable to 1987 become directives for the working out of annual economic plans and for counterplanning. Part and parcel of the details of the 5-year plan will also be the organizational assurance of the 8th Five-Year Plan and its implementing plans for the years 1987 through 1990. The same principles as are valid for 1986 will apply for counterplanning of individual economic plans for the period 1987 through 1990. The basic indicator in the coal industry is the volume of production in converted natural units while adhering to the limits of overall costs and, in the energy and gas industry, the volume of adjusted output.

The basic planning unit is the concern. The tasks, limits, and indicators and standards emanating from the state plan are detailed for individual concerns and, in accordance with intraconcern regulations in harmony with approved statutes, are further detailed for individual organizational units of the concerns.

## b) In the Area of Guiding Wage Resources

Beginning in 1986, the entire volume of wage resources is recomputed with the aid of a single-component standard.

In the coal industry, the standard is set by using the dependence of the volume of production recomputed in terms of in-kind units and encompassing the extraction of coal, the removal of overburden, the production of combustible shale, and the volume of production accounted for by construction and engineering organizations while adhering to the planned limits of overall cost.

In the energy and gas industry, the wage standard is set in conjunction with adjusted outputs (net production) which will not be reduced by deducting fines for contaminating the soil, water, and air and will continue to be objectivized by the addition of desirable deviations with respect to volumes and the structure of resources and sales of electric energy and heating gas.

The reward fund will continue to be created to the magnitude matching savings in the wage fund, provided an adequate amount of financial resources is available.

At the same time, regulations calling for the lowering or increasing of the volume of wage funds for failure to fulfill or for improving a decisive indicator, are set. Beginning in 1986, the concept of penalty clause bank credits is formulated on a broader basis so that these institutions can lower the volume of wage funds far more intensively than was the case hitherto.

## c) In the Area of Cost-Accounting Development

In expanding cost accounting, the principles which respect specific conditions of activity of branch organizations will be heeded; specifically:

i. taking into account the degree of integration and centralization of activity achieved at the concern level and the resulting limitations with respect to decisionmaking and economic authority imposed upon concern organizational units--these factors will continue to be the fundamental link in the area of cost accounting and financing of concerns;

ii. the degree of cost-accounting self-sufficiency and responsibility of concern organizational units will be stipulated by statute and by intraconcern regulations. However, it will be necessary to provide wider room to the development of enterprise cost accounting than had been the case thus far, particularly with respect to those organizations whose reproductive process is influenced by integration and by centralization from the concern level to a lesser extent (construction, engineering enterprises, etc.);

iii. in developing enterprise and intraenterprise cost accounting, attention will be paid to creating conditions for the broadest possible application of the brigade form of work organization and remuneration;

iv. the redistribution of mine and position allowances between coal mining concerns and the redistribution of write-offs from capital assets among all production economic units will continue to be applied;

v. a portion of the investment and noninvestment requirements will be covered by specific subsidies from the state budget and from centralized resources at the disposal of the Federal Ministry of Fuels and Energy;

vi. profits (losses) resulting from foreign trade transactions will be a component in the creation of overall profits.

#### d) In the Area of Prices

The constant actualization of wholesale prices will be continued, primarily with the intent to affect final production with the goal of attaining a lowering of their level and, thus, to siphon off excessive free financial resources which will occur as a result of the intensification of the reproduction process. An extensive restructuring of wholesale prices will be undertaken by 1 January 1988.

Wholesale prices of coal used for energy purposes, briquettes, electric power, and heat will be increased each year, beginning in 1986, by 2 percent compared to the level of 1985 with the proviso that consumers will have to cover these increases to a certain extent in their financial plans and in the prices of their products. Wholesale prices of coal suitable for coking and of coke will be increased by 25 percent on a one-time basis by 1 January 1988.

The continuous actualization of wholesale prices, particularly those of finished products, will clearly show the influence of the criteria of foreign prices and conditions.

#### e) In the Area of Financial Resources

The creation of financial resources will be connected primarily with the creation of profit--its growth or the lowering of losses. Simultaneously, the dependence of fund formation upon the fulfillment of planned volumes of indicators will be limited. We shall mention only three financial funds with respect to which fundamental changes will be experienced during the 8th Five-Year Plan. They are the investment fund, the fund for cultural and social measures, and the reserve fund.

##### a. Investment Fund

A single investment fund will be established in all economic organizations to finance capital construction. The basic source of this fund is an allocation, in accordance with standards, of the percent of profit and a percentage of the write-offs from capital funds. Above-standard allocations are also possible, based on profit growth in comparison to the previous year and from the fund of material stimulation of exports.

The organizations and concerns of the fuels and energy industry will also establish a unique investment fund. Its basic source will not be allocations from profit and write-offs according to standards, but so-called fixed amounts. These fixed allocations based on profits and write-offs, together with planned credits, state budget subsidies, and centralized write-offs provided by the Federal Ministry of Fuels and Energy, will cover the planned volume of investment requirements. The allocation based on centralized write-offs provided by the Federal Ministry of Fuels and Energy will be specifically directed toward decisive selected construction projects, much as is the case with respect to subsidies from the state budget.

It will also be possible to form the investment fund of a production economic unit under the jurisdiction of the Federal Ministry of Fuels and Energy from so-called subsidy allocations based on exceeding the annual planned profits or lowering the extent of planned losses and will amount to a level equivalent to 40 percent of the documented improvements of the annual planned economic result. Similarly, it is possible to transfer 50 percent of the above-planned creation of write-offs based on capital funds through the form of subsidy allocations to the investment fund. Through its intraconcern regulations, a concern can establish a system for the supplemental allocation to investment funds operated by individual concern organizational units.

The supplemental allocations may be used primarily to finance the permitted exceeding of planned limits for machinery and installations which are not included into the budget of construction projects, for the purchase of older capital assets, for contributions to affiliations involving national committees for purposes of community self-improvement program capital projects [project "Z"].

#### b. Reserve Fund

Reserve funds are basically created only at the level of general directorates of concerns and a specific change for the 8th Five-Year Plan is the increase in their maximum balance. If, by the end of 1985, the maximum remainder in the concern-oriented reserve fund was permitted to amount to 0.5 percent of adjusted outputs, then, in the 8th Five-Year Plan, it can be up to 5 percent. On the other hand, however, it is necessary to be aware that in order to obtain financial resources sufficient to cover such a high reserve fund, it will be necessary to specifically increase efficiency and economy over and above the plan which already contains highly demanding tasks with respect to the formation of profits.

In the above article, it was only possible to touch upon some of the changes in the system of economic management in the fuels and energy industry. The 17th Congress of the CPCZ obligates responsible workers in the industry to contribute toward the slowing down of the unfavorable developments affecting efficiency in our branch by perfecting this system and the economic mechanism. This requires a systems approach and consistent work and the prevention of pressures for unjustified exceptions in this area. Experience confirms that exceptions diminish the effectiveness of the management system and frequently even lead to violations of economic discipline.

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CSO: 2400/376

## EMPLOYMENT, WAGE DEVELOPMENTS IN 1985 PUBLISHED

Prague PRACE A MZDA in Czech No 6, 1986 pp 50-54

[Article by Eng Jiri Fermr, Federal Statistical Office: "Development of Employment and Wages in Czechoslovakia for the Year 1985"]

[Text] During 1985, employment in the socialist sector of the national economy (excluding the JZD's) increased by 63,000 (0.9 percent) persons and 6,892,000 persons were employed. Thus, growth lagged behind planned anticipated employment by 0.1 percent. Nevertheless, the increase in the number of workers last year was the largest of all the years of the 7th Five-Year Plan; the increment has been constantly rising since 1982 in conjunction with the more rapid development of the number of the population in the productive years and this rising tendency will continue even during the 8th Five-Year Plan. In the Czech Socialist Republic, the number of workers in 1985 rose by 37,000 (0.8 percent) to 4,827,000 and in the Slovak Socialist Republic, the number of those employed rose by 26,000 (1.3 percent) to a total of 2,065,000. Recomputed in terms of fully employed workers, their numbers in the CSR were 4,675,000 and in the SSR 2,033,000.

The number of employed women continues to increase slightly. By the end of the year, the socialist sector of the national economy (excluding the JZD's) employed 3,223,000 women, which is 46.6 percent of all workers. Furthermore, some 336,000 women were on maternity leave. In 1984, female employment accounted for 46.5 percent of the work force and, at the beginning of the 7th Five-Year Plan, 45.5 percent.

The distribution of the increment in the work force did not fully jibe with the planned intentions. While industry and the construction industry failed to achieve the planned anticipated growth in the number of workers, employment rose more rapidly than had been anticipated in health services, in education, and in domestic trade. The lower increment in the number of workers in industry and in the construction industry was manifested most expressly in the category of laborers; their numbers grew by 4,000 (0.2 percent) with respect to the principal activities of industrial enterprises and actually declined by 500 (0.2 percent) with respect to construction work conducted by construction industry organizations.



During 1985, wage development was in harmony with the state plan. Workers in the socialist sector of the national economy (excluding the JZD's) received Kcs 238.5 billion in wages, which represents an increase for the year by Kcs 6 billion (2.6 percent). Some Kcs 4.4 billion in other personal expenses were also paid. In contrast to developments during preceding years wages paid in budgetary organizations rose more (by 4.5 percent) than wages paid in economic organizations (by 2.2 percent) which was caused, on the one hand, by wage adjustments in education and the health services and by a more rapid growth in the number of workers in the most productive branches of the economy and, on the other hand, by the lower-than-planned formation of wage funds in manufacturing organizations.

The wage structure is beginning to reflect the influence of the second phase of the program to increase the economic effectivity of the wage system in a growing number of basic wages. The second phase was initiated during 1985 in selected organizations of the main production branches and is connected with the application of new categories with higher wage tariffs which will strengthen the task of the wage tariff in earnings. In economic organizations, the share of basic wages in the total of wages paid rose from 75.2 percent in the 4th quarter of 1984 to 76.4 percent in the 4th quarter of 1985. The share of bonuses and rewards accounted for 18.9 percent and participation in economic results accounted for 4.7 percent of all wages paid during this quarter.

As a result of the deterioration in fulfilling the plan of indicators established as a basis for wage regulation (particularly the indicator dealing with adjusted value added), the volume of wage funds created in excess of the annual plan in economic organizations declined from Kcs 2.3 billion in 1984 to Kcs 700 million in 1985 and, if one includes payments which can be added and subtracted, it declined from Kcs 3 billion to Kcs 1.5 billion. Savings in wage funds, the volume of which can be added to by organizations by transferring funds from taxed profits to the special compensation fund declined in this connection compared with last year by 16 percent to a level of Kcs 6.3 billion; adjusted savings (savings lowered by exceeding contractual limits by organizations having unfavorable economic results) amounted to Kcs 5.9 billion. Amounts remaining in special compensation funds last year, in contrast to developments during preceding years, declined by Kcs 7.6 billion; even so, this remainder still represents roughly Kcs 1,360 per employee of economic organizations.

Average monthly wages for workers in the socialist sector of the national economy (excluding the JZD's) rose in harmony with the state plan. The average wage computed in terms of physical persons, rose in the CSSR by Kcs 46 (1.6 percent) to a level of Kcs 2,883; in the CSR, it rose by Kcs 43 (1.5 percent) to a level of Kcs 2,900; and in the SSR, it rose by Kcs 53 (1.9 percent) to a level of Kcs 2,844; recomputed in terms of the number of workers in full-time employment, the wages for Czechoslovakia averaged Kcs 2,962, for the CSR Kcs 2,994, and for the SSR Kcs 2,888.

Table I. Number of Workers and Average Monthly Wages in the Principal Branches of the Economy in 1985

Branch (area of activity)	Average Number of Employees of Record (in terms of physical persons)	Increase; Decrease (-) Compared With 1984		Average Wage in Kcs (in terms of physical persons)	Increase; Decrease (-) Com- pared With 1984	
		Abso- lute	%		Abso- lute Kcs	%
Socialist sector of the national economy (excluding JZD's)	6,892,023	63,222	0.9	2,883	46	1.6
Including:						
Industry as a whole	2,730,696	14,920	0.5	3,088	52	1.7
Including the following planning groups:						
Coal extraction	180,518	1,928	1.1	4,358	34	0.8
Production of heat and electricity	74,886	1,675	2.3	3,467	97	2.9
Ferrous metallurgy	153,724	-773	-0.5	3,487	43	1.8
Chemical industry	130,766	674	0.5	3,244	61	1.9
Rubber industry	37,562	199	0.5	3,065	83	2.8
Engineering industry as a whole	1,034,799	10,764	1.1	3,083	51	1.7
Including:						
Electrotechnical industry	234,309	4,967	2.2	2,888	87	3.1
Building materials industry	108,007	-451	-0.4	3,069	70	2.3
Wood processing industry	115,035	-807	-0.7	2,680	60	2.3
Glass and porcelain industry	86,437	-23	0.0	2,668	41	1.5
Textile industry	211,457	-1,270	-0.6	2,506	45	1.8
Clothing industry	54,731	21	0.0	2,525	20	0.8
Leatherworking and footwear industry	83,565	96	0.1	2,812	24	0.9
Foodstuffs industry	200,231	1,288	0.6	2,830	51	1.8
Construction industry	549,557	1,469	0.3	3,185	80	2.6
Design organizations	53,226	1,135	2.2	3,525	6	0.1
State farms	165,951	137	0.1	2,976	71	2.4
State forests	96,912	1,304	1.4	3,008	68	2.3
Railroad transportation	211,018	1,446	0.7	3,369	-30	-0.9
Automobile transportation	103,140	350	0.3	3,192	5	0.2
Communications	127,374	1,507	1.2	2,585	25	1.0
Domestic trade as a whole	597,709	6,377	1.1	2,335	9	0.4
Including:						
Retail trade	251,057	3,783	1.5	2,249	3	0.1
Public catering	164,500	1,543	0.9	2,116	3	0.1

Table I (continued)

Branch (area of activity)	Average Number of Employees of Record (in terms of physi- cal per- sons)	Increase; Decrease (-) Compared With 1984		Average Wage in Kcs (in terms of physical persons)	Increase; Decrease (-) Com- pared With 1984	
		Abso- lute	%		Abso- lute Kcs	%
Enterprises of local pro- duction and services	234,867	1,895	0.8	2,514	46	1.9
Education	432,971	7,563	1.8	2,590	75	3.0
Health services	337,385	7,549	2.3	2,677	79	3.0

The most rapid growth in average wages was experienced by workers in the health services and in education as a result of the previously mentioned wage adjustments at the beginning of 1985 and workers in the electrotechnical industry. In contrast, lower increments in average wages were experienced by domestic trade and automotive transportation, and in railroad transportation the average wage actually declined as a particular consequence of the lowering of the railroad's share in economic results. In the overwhelming majority of branches, the average wages of workers grew somewhat more rapidly than the salaries of technical-economic employees.

Planned relativity between the growth of productivity (in production) and the growth of average wages were not achieved, either in industry or in the construction industry. However, the actual growth of productivity of labor in both of these branches outstripped the growth which had been presupposed in the plan. Productivity with respect to adjusted value added components rose expressly more rapidly.

#### Reminder to Readers:

Beginning with the 1st quarter of 1986, Tables I through III will list the number of workers and average wages recomputed in terms of fulltime employees, whereas, thus far, these data were listed in terms of physical persons. In the majority of branches, the number of workers recomputed in terms of fulltime employees is lower than the actual number of physical persons and, consequently, the average wage computed in terms of recomputed numbers of workers in these branches is higher than if calculated in terms of physical persons. The differences in 1985 can be seen by comparing data in Tables I and III with data in Table IV, which has been included for this purpose on an extraordinary basis.

Table II. Structure of Average Monthly Wage in the Main Production Branches and Index of Growth of Labor Productivity in Industry and in the Construction Industry in 1985

Branch (area of activity)	Average Monthly Wage (in terms of physical persons)					
	Including Kcs From					Index** of Labor Productivity
	Total		Basic Wages, Including Extra Pay and Allowances	Bonuses and Rewards	Participation in Economic Results	
	In Kcs	Index*				
Industry, total	3,088	101.7	2,404	606	78	105.2
Including the following planning groups:						
Extraction of coal	4,358	100.8	3,282	951	125	97.4
Production of heat and electricity	3,467	102.9	2,679	697	91	104.2
Ferrous metallurgy	3,487	101.8	2,778	596	113	106.9
Chemical industry	3,244	101.9	2,468	669	107	108.8
Rubber industry	3,065	102.8	2,313	689	63	105.9
Engineering industry, total	3,083	101.7	2,452	569	62	106.6
Including:						
Electrotechnical industry	2,888	103.1	2,277	540	71	109.5
Building materials industry	3,069	102.3	2,433	589	47	104.6
Wood processing industry	2,680	102.3	2,103	535	42	103.1
Glass and porcelain industry	2,668	101.5	2,099	518	51	106.3
Textile industry	2,506	101.8	1,909	545	52	106.0
Clothing industry	2,525	100.8	1,943	527	55	108.5
Leatherworking and footwear industry	2,812	100.9	2,076	647	89	107.3
Foodstuffs industry	2,830	101.8	2,129	572	129	102.4
Construction industry	3,185	102.6	2,529	608	48	103.7
Design organizations	3,525	100.1	2,570	804	151	...
State farms	2,976	102.4	2,440	390	146	...
State forests	3,008	102.3	2,434	496	78	...
Railroad transportation	3,369	99.1	2,726	515	128	...
Automotive transportation	3,192	100.2	2,733	380	89	...
Communications	2,585	101.0	2,055	396	134	...
Domestic trade	2,335	100.4	1,966	280	89	...

\* In percent of the share of average wages for 1985 and 1984.

Footnotes to Table II (continued)

\*\* In percent of the share of labor productivity based on adjusted value added for 1985 and 1984. The index of labor productivity based on gross production in industry was 103.0 and in basic construction output in the construction industry 101.0.

Table III. Number and Average Monthly Wages of Blue-Collar and White-Collar Workers in the Principal Activities Engaged in by the Production Branches for the Year 1985

Branch (area of activity)	Blue-Collar Workers			White-Collar Workers		
	Average Number of Workers of Record (in terms of physical persons)	Average Wage in Kcs (in terms of physical persons)	Index*	Average Number of Employees of Record (in terms of physical persons)	Average Salary in Kcs (in terms of physical persons)	Index*
Industry, total Including the following planning groups:	1,861,869	3,034	102.0	544,398	3,478	101.0
Extraction of coal	132,356	4,477	100.7	38,894	5,060	101.6
Production of heat and electricity	47,410	3,409	103.0	20,196	3,845	102.8
Ferrous metallurgy	111,433	3,462	102.2	26,964	4,028	100.6
Chemical industry	75,612	3,214	102.2	26,534	3,831	101.2
Rubber industry	26,070	3,000	103.3	6,122	3,531	101.5
Engineering industry, total Including:	651,252	3,043	102.1	244,023	3,314	100.8
Electrotechnical industry	143,721	2,746	103.8	52,928	3,235	102.2
Building materials industry	77,009	3,012	102.5	22,759	3,505	102.1
Wood processing industry	85,810	2,624	102.6	18,483	3,099	100.9
Glass and porcelain industry	65,588	2,573	102.1	13,295	3,271	99.6
Textile industry	62,714	2,403	102.1	30,684	3,168	101.0

Table III (continued)

Branch (area of activity)	Blue-Collar Workers			White-Collar Workers		
	Average Number of Workers of Record (in terms of physical persons)	Average Wage in Kcs (in terms of physical persons)	Index*	Average Number of Employees of Record (in terms of physical persons)	Average Salary in Kcs (in terms of physical persons)	Index*
Clothing industry	42,875	2,423	101.0	7,728	3,157	99.9
Leatherworking and footwear industry	63,837	2,722	100.9	11,821	3,428	100.2
Foodstuffs industry	145,222	2,749	102.1	38,262	3,335	101.0
Construction industry	300,017	3,118	102.7	93,166	3,721	102.7
State farms	132,914	2,945	102.6	24,220	3,456	101.7
State forests	72,046	2,869	102.4	22,364	3,531	102.0
Railroad transportation**	66,991	3,814	98.9	56,845	3,396	98.7
Automotive transportation	59,129	3,021	100.5	17,169	3,090	99.2
Communications**	71,613	2,199	101.2	25,017	3,348	100.0
Domestic trade**	400,950	2,210	100.6	95,907	2,875	100.9

\* In percent of the share of average wages for 1985 and 1984.

\*\* In place of blue-collar workers, operating and service personnel are listed.

Table IV. Number of Workers Recomputed for Fulltime Employees and Average Monthly Wages Per Recomputed Number of Workers in Main Branches of the Economy for 1985

Branch (area of activity)	Average Number of Workers of Record			Average Monthly Wage in Kcs		
	Total	Including		Total Number of Workers	Including	
		Blue-Collar Workers*	White-Collar Workers*		Blue-Collar Workers*	White-Collar Workers*
Socialist sector of the national economy (excluding JZD's)	6,708,355	...	...	2,962	...	...

Table IV (continued)

Branch (area of activity)	Average Number of Workers of Record			Average Monthly Wage in Kcs		
	Total	Including		Total Number of Workers	Including	
		Blue-Collar Workers*	White-Collar Workers*		Blue-Collar Workers*	White-Collar Workers*
Including:						
Industry as a whole	2,714,782	1,851,321	541,437	3,106	3,052	3,497
Including the following planning groups:						
Coal extraction	180,087	132,165	23,862	4,369	4,483	5,067
Production of heat and electricity	74,882	47,518	20,113	3,468	3,401	3,860
Ferrous metallurgy	154,634	112,322	26,895	3,466	3,434	4,039
Chemical industry	130,794	76,056	26,427	3,243	3,195	3,846
Rubber industry	37,534	26,074	6,107	3,067	2,999	3,540
Engineering industry as a whole	1,030,903	649,801	242,195	3,094	3,050	3,339
Including:						
Electro-technical industry	232,394	142,513	52,404	2,912	2,769	3,268
Building materials industry	107,933	77,089	22,687	3,071	3,008	3,516
Wood processing industry	113,471	84,417	18,407	2,717	2,667	3,112
Glass and porcelain industry	84,721	64,035	13,219	2,722	2,635	3,290
Textile industry	207,915	159,631	30,559	2,549	2,450	3,181
Clothing industry	53,507	41,744	7,703	2,582	2,489	3,167

Table IV (continued)

Branch (area of activity)	Average Number of Workers of Record			Average Monthly Wage in Kcs		
	Total	Including		Total	Including	
		Blue-Collar Workers*	White-Collar Workers*	Number of Workers	Blue-Collar Workers*	White-Collar Workers*
Leather-working and foot-wear industry	81,860	62,271	11,792	2,871	2,790	3,437
Foodstuffs industry	198,958	144,296	38,114	2,848	2,767	3,348
Construction industry	546,904	298,194	92,862	3,200	3,138	3,733
Design organizations	51,936	...	...	3,613	...	...
State farms	166,432	133,482	24,189	2,968	2,932	3,460
State forests	96,190	71,378	22,328	3,030	2,896	3,531
Railroad transportation**	211,892	67,400	56,739	3,355	3,791	3,402
Automobile transportation	102,508	58,694	17,092	3,211	3,044	3,104
Communications**	122,506	67,226	24,830	2,688	2,343	3,373
Domestic trade as a whole**	564,708	374,031	94,821	2,474	2,369	2,908
Including:						
Retail trade	231,128	...	...	2,443	...	...
Public catering	155,906	...	...	2,232	...	...
Enterprises of local production and services	224,560	...	...	2,630	...	...
Education	410,041	...	...	2,735	...	...
Health services	321,125	...	...	2,813	...	...

\* In industry and the construction industry, only with respect to principal activities.

\*\* In place of workers, operating and service personnel are listed.

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## WAGE DIFFERENTIATION BY CATEGORY, EDUCATION VIEWED

Prague STATISTIKA in Czech No 5, 1986 pp 211-220

[Article by Jaroslav Kux: "Wage Differentiation in the Czechoslovak National Economy"; first three paragraphs are STATISTIKA introduction]

[Text] Issue No 8 of STATISTIKA in 1984 published a contribution dealing with the possibilities for the wider utilization of progressive methods of statistical research and processing. Readers were acquainted with a one-time selective investigation of worker wages for June 1984, based on an untraditional progressive form of direct utilization of data obtained from the automated processing of personnel and wage files from selected organizations with individual data dealing with individual workers being taken over via technical carriers--magnetic tapes. It was expected that this form of processing would render the entire investigation more economical and would reduce the labor-intensive nature of the work in specialized sections of the reporting units and it was also anticipated that the results would provide a deeper insight in comparison to possibilities provided by current statistical work and compared to results of previous one-time investigations.

The evaluation of the research, which was conducted after completion of the investigation, clearly indicated the realistic nature of this form of investigation and the technical solvability of the problem; the possibilities of sorting data according to the required viewpoints inherent in the investigation yielded richer and new information and confirmed its lower labor intensity and overall efficiency.

The following article presents the main substantive findings resulting from the investigation in the area of wages and wage differentiation in the Czechoslovak national economy.

The results of the investigation are represented by data covering approximately 750,000 workers which is roughly 10 percent of the total number of workers in the national economy. The data cover all decisive branches of the production and nonproduction spheres--industry, construction, agriculture (including JZD's), transportation, communications, commerce, education, health services, culture, the scientific research base, and state administration, even though coverage varies for individual branches. The data do not pertain to forestry, some branches of the economy controlled by national committees

(local industry and construction, municipal services, automobile transportation and mass municipal transportation, etc.) nor does it cover production and consumer cooperatives. The cumulative data obtained pertaining to the level of relative wages for individual branches differs only slightly from cumulative data obtained by the current reporting system (determined by the exhaustive method) and, in their totality, appear to be satisfactorily representative. (All data pertain to the month of June 1984--with respect to the movable wage components, that is to say, bonuses, rewards, and shares in economic results, the data represent monthly averages for the entire first half of 1984.)

#### Average Wages and the Level of Education

The investigation proved, in principle, the influence of education on the level of average wages attained, even if this was not always evident to the extent which appeared to be desirable. Skilled workers or workers with a middle school education have wages which are not quite 25 percent higher than workers who only have a basic education; similarly, advanced school graduates have wages that are about 25 percent higher than skilled workers or workers with a middle school education and their wages are more than half as great again than workers with only a basic education. However, the differences between the level of average wages for skilled workers and workers with a completed middle school education (and, according to the computations, even workers with an incomplete middle school education) are only minimal. However, the investigation showed that these specific leveling tendencies, which were manifested in the averages for all workers, are decisively influenced by the difference in the structure by sex--among skilled workers, males predominate in the overall level of average wages; among workers with a middle school education, it is women who have a relatively lower level of wages attained. Both men and women having completed middle school educations attain higher wages than men and women skilled workers.

Similar relationships with respect to average worker wages are found in individual categories. With respect to blue-collar workers, however, the influence of having passed an apprenticeship is somewhat more specific--skilled blue-collar workers receive about 30 percent more in wages than blue-collar workers who only have a basic education; with respect to operating or servicing workers, the influence of having passed an apprenticeship is, on the whole, negligible and, with respect to these workers, the influence of a middle school education is also considerably lower. With respect to white-collar workers, the influence of education (middle school as well as advanced school) is slightly lower than is evident from the cumulative data listed. In June 1984, the average blue-collar worker earned 17 percent more than operating and service personnel and white-collar workers earned 12 percent more than blue-collar workers (the listed data are, however, appreciably influenced by the number of working days in June 1984--21 days--a factor which exerts an immediate influence on the magnitude of average wages earned, particularly by blue-collar workers).

These wages differ to a variable extent. With respect to budgetary organizations, for example, the difference is in average wages earned by advanced

school graduates and middle school graduates (44 percent) are higher than is the case with respect to economic organizations (27 percent). Science and research, but also health services, education, and other activities, are among those branches of the economy enjoying the relatively greatest differentiation in average wages from this standpoint.

Table 1. Average Monthly Wages of Workers by Level of Education (Excluding JZD's)

Sex, Category	Unit of Measure	Total	Including Following Type of Education			
			Basic	Journey-man	Completed Middle School	Advanced School
Total number of workers	Kcs	2,917	2,428	3,006	3,003	3,789
	%	100	83.2	103.1	102.9	129.9
Including:						
Men	%	100	88.0	98.0	105.5	122.1
Women	%	100	90.1	94.8	107.2	137.4
Of the total number of workers:						
Blue-collar workers	Kcs	2,865	2,422	3,156	...	...
	%	100	84.5	110.2	...	...
Operating and service personnel	Kcs	2,439	2,378	2,432	2,577	2,967
	%	100	97.5	99.7	105.7	121.6
White-collar workers	Kcs	3,214	2,588	3,157	3,045	3,815
	%	100	80.5	98.2	94.7	118.7

In economic organizations, the difference between the average wage of a skilled worker and one who only has a basic education is approximately 20 percent; but this figure is higher in a number of other areas--in the fuel extraction industry, in heavy engineering, but also in the foodstuffs industry, it is around 30 to 35 percent. In the area of transportation (which is here represented only by railroad and water transportation) the differences are only minimal--the wages of skilled workers are only slightly less than 5 percent higher than the wages of workers who have a basic education and, similarly, the wages of advanced and middle school graduates are, on average, only about 7 percent higher than those of skilled workers.

The level of wages for workers who fulfill the qualification requirements to execute work or a specific function (according to their educational level or in practice) is cumulatively higher than the level of wages of workers who fail to fulfill one or another of the qualification requirements--on average for all workers, the level is lower by about 12 percent. With respect to journeyman blue-collar workers, the difference in wages based on fulfillment of qualification requirements is relatively pronounced (16 percent) whereas, for example, the difference with respect to workers having completed a middle school education virtually does not exist. With respect to workers with an advanced school education, the above-mentioned difference is only about 9 percent (which, given the average wage of Kcs 3,789 for these workers represents approximately Kcs 350); in general, these are workers who have not fulfilled the requirements governing the length of employment.

Table 2. Average Monthly Wages of Workers by Level of Education in Selected Branches (in Kcs)

Branch (Activity)	Total	Basic	Journey- man	Including Following Type of Education	
				Completed Middle School	Advanced School
Total economic organizations	2,961	2,505	3,031	3,190	4,058
Total budgetary organizations	2,649	...	...	2,469	3,559
Industry	3,069	2,493	3,231	3,299	4,156
Construction industry*	3,020	2,557	3,043	3,277	4,022
State farms*	3,048	2,832	3,147	3,386	4,148
Transportation*	3,158	3,045	3,178	3,385	3,393
Scientific research base	3,071	...	...	2,766	3,793
JZD's--net remuneration	2,620	2,357	2,950	2,731	3,127

\* Data for the CSR.

#### Average Wages and Worker Age

Under the conditions which exist in the Czechoslovak national economy with the full employment of all citizens capable of performing work, the age of the worker at the same time also reflects the length of his lifetime economic activities and his work experiences. This viewpoint is, thus, an important criterion in evaluating the level of average worker wages attained.

The results of the investigation indicate that even this qualifying characteristic of workers is an important factor in the level of average wages achieved. The level of wages grows as work and life experiences increase, on average up to the age group of 40-44 years, when it peaks; a considerable rise in the level of wages achieved occurs particularly during the first 10 to 15 years of economic activity; subsequently, the growth diminishes. After age 45, average worker wages stagnate or even experience a slight decline (with respect to workers in the postproductive years, there is naturally a more pronounced decline."

With respect to individual categories of workers, however, the situation is quite different. Average blue-collar wages, as is the case with the average for all workers, also grow roughly until age 40 to 44 but then they already start declining; overall, it can be stated that after gathering essential experiences, average blue-collar wages are quite balanced between the ages of 30 and 50 and are, on average, around Kcs 3,000 to Kcs 3,150. These tendencies are noted both with respect to journeyman blue-collar workers as well as with respect to blue-collar workers having a basic education. For operating and service personnel, average wages tend to rise until age 50 to 54 with a notable balancing of average wages occurring roughly from 35 to 60 years of age (wages are between Kcs 2,600 and Kcs 2,750). The greatest dependency between the level of average wages and worker age exists with respect to white-collar workers--their average wages constantly increase through the end of their productive years and show a rapid rise, particularly through ages 40 to 45 and

again for the final 5-year age group prior to reaching retirement age. Their average wages do not decline below the overall average wage for this category of employee even during economic activities in the postproductive years. White-collar workers below age 30 have lower wages than do blue-collar workers; they do not catch up until age group 30 to 34 and, in subsequent years, white-collar wages then gradually exceed blue-collar wages.

Table 3. Average Monthly Wages of Workers by Age Group (Excluding JZD's)

Age Group	Share in Overall Number of Workers (%)	Average Monthly Wage	
		In Kcs	In % of Total
Total	100.0	2,917	100.0
Including those in following age groups (in years):			
Up to 19	3.3	1,898	65.1
20 to 24	9.7	2,409	82.6
25 to 29	13.1	2,739	93.9
30 to 34	15.2	2,919	100.1
35 to 39	14.6	3,090	105.9
40 to 44	12.5	3,210	110.0
45 to 49	10.1	3,185	109.2
50 to 54	10.1	3,162	108.4
55 to 59	6.7	3,178	108.9
60 and over	4.7	2,392	82.0

Table 4. Average Monthly Wages in Categories of Workers by Age (Excluding JZD's)

Age Group	Blue-Collar Workers		Operating and Service Personnel		White-Collar Workers	
	In Kcs	In % of Total	In Kcs	In % of Total	In Kcs	In % of Total
Total	2,865	100.0	2,439	100.0	3,214	100.0
Including those in following age groups (in years):						
Up to 19	1,954	68.2	1,787	73.3	1,704	53.0
20 to 24	2,572	89.8	2,091	85.7	2,147	66.8
25 to 29	2,894	101.0	2,304	94.5	2,637	82.0
30 to 34	2,991	104.4	2,430	99.6	2,996	93.2
35 to 39	3,107	108.4	2,580	105.8	3,248	101.1
40 to 44	3,131	109.3	2,689	110.3	3,487	108.5
45 to 49	3,049	106.4	2,634	108.0	3,555	110.6
50 to 54	2,917	101.8	2,738	112.3	3,692	114.9
55 to 59	2,842	99.2	2,684	110.0	3,989	124.1
60 and over	2,215	77.3	2,014	82.6	3,490	108.6

As has already been mentioned, average wages of advanced school graduates exceed those of workers with a completed middle school education. In view of the longer period of preparation for a profession and the concomitantly shorter period of economic activity on the part of advanced school graduates, the lifelong earnings for both groups of workers become balanced to a considerable extent. White-collar employees with advanced school education basically do not catch up with respect to their total earnings from wages from the time they begin their employment with wages earned by employees having a middle school education until roughly age 40 and, although their average monthly wage is higher by 25 percent, their lifetime wage earnings are only slightly less than 10 percent higher, on average, by the end of their productive years.

Table 5. Average Monthly Wages and Total Wage Earnings of White-Collar Workers With a Completed Middle School and Advanced School Education by Age Group (Excluding JZD's)

Age Group	Completed Middle School Education			Advanced School Education			Total Wage Earnings, Advanced School Education in % of Middle School Education
	Average Wage in Kcs	No of Years*	Total Earnings in Thousand Kcs*	Average Wage in Kcs	No of Years*	Total Earnings in Thousand Kcs*	
Up to 19	1,732	1	21	--	--	--	--
20 to 24	2,139	6	149	2,359	1	28	19.0
25 to 29	2,546	11	302	2,872	6	201	66.5
30 to 34	2,843	16	472	3,487	11	410	86.7
35 to 39	3,105	21	659	3,883	16	643	97.6
40 to 44	3,391	26	862	4,027	21	884	102.6
45 to 49	3,541	31	1,075	3,185	26	1,136	105.7
50 to 54	3,755	36	1,300	4,525	31	1,407	108.2
55 to 59	4,065	41	1,544	4,785	36	1,694	109.7

\* For the period of total economic activity beginning with initial employment after completing school.

#### Number of Workers by Average Wage

Wages for individual workers move from relatively lower wage levels to Kcs 2,000 (only about 14 percent of the workers) to relatively high wages above Kcs 5,000 (approximately 6 percent of the workers). Approximately 70 percent of all workers earn wages from Kcs 2,000 to Kcs 4,000, approximately one-fifth of the total number of workers in the national economy earns from Kcs 2,500 to Kcs 3,000. Generally the same facts hold true for blue-collar workers, whereas, for example, operating and service personnel are concentrated more expressly in the lower levels--approximately 83 percent of these workers earn between Kcs 1,500 and Kcs 3,500 whereas more than one-fourth of all workers earn from Kcs 2,000 to Kcs 2,500. Similarly, with respect to white-collar employees, a relative concentration of average wages exists in certain regions--as is the case with respect to blue-collar workers,

approximately 70 percent of white-collar employees earn wages from Kcs 2,000 to Kcs 4,000 per month with virtually one-quarter of all white-collar workers earning more than Kcs 4,000 and approximately 8 percent of all white-collar workers earning in excess of Kcs 5,000 a month.

Table 6. Structure of the Number of Workers by Average Monthly Wage by Category (Excluding JZD's) in Percent\*

Average Monthly Wage Groups (in Kcs)	Total	Including		
		Blue-Collar Workers	Operating and Service Personnel	White-Collar Workers
		Number of Workers in %		
Total	100.0	100.0	100.0	100.0
Including following group- ings:				
Up to 1,500	2.5	3.7	2.4	0.7
1,501 to 2,000	11.4	12.5	19.9	6.3
2,001 to 2,500	18.6	17.7	27.2	16.6
2,501 to 3,000	19.7	18.7	20.9	20.9
3,001 to 3,500	17.2	17.1	14.6	18.5
3,501 to 4,000	12.5	12.5	8.3	14.0
4,001 to 4,500	7.8	7.9	3.9	9.3
4,501 to 5,000	4.5	4.4	1.7	5.7
5,001 to 6,000	3.8	3.6	0.9	5.1
6,001 and more	2.0	1.9	0.2	2.9
Coefficient of variation (in %)	36.4	37.0	31.0	34.9

\* Only for workers who have worked at least 150 hours during the month.

The influence of education on the level of average wages earned is reflected even in the breakdown of the number of workers by wage groups. Whereas three-fourths of the blue-collar workers with a basic education earn wages from Kcs 1,500 to Kcs 3,500 per month roughly, the same number of skilled workers earn from Kcs 2,000 to Kcs 4,500 per month. With respect to operating and service personnel, there does not seem to be a basic influence on the level of average wages exerted by education. White-collar workers with a basic education generally earn (about 84 percent of them) from Kcs 1,500 to Kcs 3,500 per month and about 80 percent of skilled workers or workers with a middle school education earn from Kcs 2,000 to Kcs 4,500 per month. White-collar employees with an advanced school education then roughly earn wages from Kcs 2,500 to Kcs 5,000 in the same proportion; roughly every sixth advanced school graduate then earns average wages in excess of Kcs 5,000.

#### Wage Categories and Tariff Classes

According to the valid wage law, which was introduced gradually effective in 1973 within the framework of rationalization of work and wage regulations, workers were receiving remuneration in 1984 in accordance with a total of 11

Table 7. Structure of the Number of Workers by Magnitude of Average Monthly Wage According to Degree of Education (Excluding JZD's) in Percent\*

Average Monthly Wage Groups (in Kcs)	Blue-Collar Workers		Operating and Service Personnel		White-Collar Workers			
	<u>Z</u>	<u>V</u>	<u>Z</u>	<u>V</u>	<u>Z</u>	<u>V</u>	<u>SS</u>	<u>VS</u>
	Number of Workers in %							
Total								
Including following group- ings:								
Up to 1,500	7.2	1.6	4.6	1.3	1.5	0.7	0.9	0.1
1,501 to 2,000	21.1	7.4	24.1	19.3	15.3	6.9	7.7	0.8
2,001 to 2,500	23.4	14.0	24.6	29.1	28.4	16.7	20.0	5.8
2,501 to 3,000	18.3	19.2	17.3	21.8	26.2	10.4	22.3	16.5
3,001 to 3,500	13.0	19.9	13.9	14.4	13.7	17.8	18.3	20.3
3,501 to 4,000	8.2	15.2	8.6	7.9	7.3	14.8	13.2	17.5
4,001 to 4,500	4.3	10.0	4.0	3.7	3.8	10.1	8.0	13.4
4,501 to 5,000	2.1	5.6	1.7	1.5	2.0	6.0	4.4	9.5
5,001 to 5,500	1.0	3.0	0.7	0.6	0.9	3.3	2.2	6.0
5,001 to 6,000	0.6	1.6	0.3	0.3	0.4	1.4	1.3	3.7
6,001 and more	0.8	2.5	0.2	0.1	0.5	1.9	1.7	6.4
Coefficient of variation (in %)	37.4	34.1	33.7	29.5	30.5	33.8	33.0	32.6

\* Only for workers who have worked at least 150 hours during the month.

Key: Z = basic education; V = skilled workers; SS = completed middle school education; VS = advanced school education.

wage categories (effective 1985, selected organizations of gradually applying the second stage of increasing the economic effectivity of the wage system with somewhat different wage graduations and increased tariff levels). Fully 95 percent of the blue-collar workers from branches included in the investigation were receiving remuneration in accordance with the first six grades of the wage tariff tables, from Kcs 4.50 in tariff class 1 of level 1 (basic level) to Kcs 17.00 in tariff class 9 of level 6 (valid for work underground). A comparison of the level of monthly wages for blue-collar workers according to these six grades with valid tariff levels shows differences in wages between individual grades to be substantially more specific than would be evident from the wage tables. Rising categories with higher tariff rates, thus, increase pressure on wages and cause above-tariff components of wages to rise while the share of the wage tariff in total earnings declines.

Similarly, a review of the distribution of the number of workers in individual tariff classes shows that in the overall numbers included in the nine levels, the marginal levels are only occupied to a minimum extent (the lowest level 1 is virtually unoccupied). More than 80 percent of blue-collar workers are in levels 4 through 7; level 5 alone includes one-fourth of the total number of blue-collar workers. The share of the wage tariff in total earnings is



generally in balance for all levels so that the wage range between classes 2 and 9, based on tariff rates (1:2.9) basically reflects the actual range (1:2.8). With respect to the above-mentioned 80 percent of blue-collar workers who are classified in classes 4 through 7, the above-listed range is substantially lowered to a level of 1:1.6.

Table 8. Average Blue-Collar Wages in Main Wage Categories of Tariffs Applicable in Industry\*

Wage Category	Tariff Level			Average Monthly Wage	
	In Kcs/hr		In % of Category 1	In % of	
	Class 1	Class 9		In Kcs	Category 1
1	4.50	12.40	100.0	2,071	100.0
2	4.80	13.20	106.5	2,642	127.6
3	5.10	14.10	113.6	2,990	144.4
4	5.40	15.00	120.7	3,463	167.2
5	5.80	16.00	129.0	3,687	178.0
6	6.20	17.00	137.3	4,300	207.6

\* Only for workers who have worked at least 150 hours during the month.

Table 9. Average Worker Wages by Tariff Classes\*

Tariff Class	No of Work- ers (in %)	Average Tariff		Total Wages	
		Kcs/hr	In % of Class 2	Kcs/hr	In % of Class 2
1	0.2	..	...	..	...
2	0.5	5.50	100.0	9.60	100.0
3	6.8	6.10	110.9	10.80	112.5
4	19.1	7.30	132.7	12.80	133.3
5	24.9	8.60	156.4	15.10	157.3
6	19.7	10.10	183.6	17.80	185.4
7	19.2	11.60	210.9	19.90	207.3
8	8.3	13.50	245.5	22.70	236.5
9	1.3	16.00	290.9	27.00	281.3

\* Only for workers who have worked at least 150 hours during the month.

Similarly, in remunerating technical-economic workers use of basic category I is overwhelming (in industry, for example, some 70 percent of technical-economic workers are remunerated in accordance with this category, and more than 80 percent of them are paid as operating personnel in category IA and IB. The inclusion of technical-economic workers into a few median tariff classes shows up even more specifically than is the case with respect to blue-collar workers. Of the overall number of 17 tariff classes and an additional 4 classes for remunerating managers, fully 94 percent of the technical-economic workers qualify for 8 classes, ranging from class 6 through class 13, with approximately 80 percent being classes 8 through 12; in industry, virtually one-half of all the technical-economic employees qualify for inclusion only in 2 classes--10 and 11. The opportunities to differentiate in wages, which are

given by the tariff classes and tariff wages are, thus, in practice, substantially narrowed--in comparison to the overall range of tariff wages in classes 1 and 20 at a ratio of 1:6.8 (calculated from the median range of category I; class 21 represents personal salaries), or with respect to tariff wages in classes 1 and 17, at a ratio of 1:5.1, the actual range of average wages between the most densely occupied classes 6 through 13 (which include 94 percent of technical-economic employees) is only 1:2.3 and the ratio between classes 8 through 12 (containing 80 percent of the technical-economic workers) is actually only 1:1.6. The spread of average wages between classes 10 and 11 (containing virtually one-half of the technical-economic employees in industry) is only 1:1.1.

From the review, it is evident that even if the above-tariff components of wages, that is to say, predominantly bonuses, rewards, and shares in economic results, are generally increasing as the growth of tariff classes occurs (for example, in industry the rise is from 16 percent in class 6 to 31 percent in class 18) these components are not able to substantially influence this leveling tendency which results from the concentration of the number of technical-economic employees into only a few tariff classes.

#### Selected Professions

The investigation also provided valuable data on average wages achieved by workers in selected professions and their differentiation. Workers in a number of blue-collar professions as well as technical-economic workers are classified into several tariff classes which frequently show a considerable differentiation in wages. The data in the following review are, therefore generally listed in the form of the spread with respect to the most densely encumbered tariff classes for appropriate professions. In judging the justification of wage differences between professions, however, it was necessary to take account of numerous aspects (for example, the extent of overtime work, etc.); nevertheless, even these data provide a significant orientational overview of the status of remuneration in a number of professions and trades.

The results of the investigation are captured on magnetic disks and, in conjunction with the establishment of the Federal Data Bank, are being prepared for management use in the interactive regime. Program solutions are being assured by the Research Institute for Socioeconomic Information and Automation at Bratislava with an SOFIS device; during 1986, the entire data base will be handed over for operational purposes to an EC-1055 computer at the Federal Statistical Office in Prague. The data base will be administered by the Department of Labor Statistics and Nonproductive Branches in the Federal Statistical Office and the Federal Ministry of Labor and Social Affairs will be the principal user.

It is anticipated that a one-time wage investigation will be repeated in 1988-1989, again using technical carriers and given the expansion of the circle of reporting components in conjunction with the automation of personnel and wage records in reporting organizations. The results of that investigation will be fed into the data base and will be correlated with the results of the 1984 investigation, which will yield additional classification possibilities from the standpoint of wage development involving a selected circle of workers.

Table 10. Average Wages for Technical-Economic Workers in Tariff Classes\*

Tariff Class	Share of Technical-Economic Workers (in %)	Tariff Wage		Overall Wage	
		In Kcs	In % of Class 6	In Kcs	In % of Class 6
6	4.2	1,570	100.0	2,134	100.0
7	7.5	1,750	111.5	2,313	108.4
8	12.4	1,950	124.2	2,693	126.2
9	16.5	2,175	138.5	3,024	141.7
10	22.0	2,400	152.9	3,499	164.0
11	17.9	2,650	168.8	3,876	181.6
12	9.1	3,075	195.9	4,362	204.4
13	4.0	3,350	213.4	4,865	228.0
14	2.2	3,700	235.7	5,496	257.5
15	0.7	4,050	258.0	5,950	278.8
16	0.3	4,400	280.3	6,347	297.4
17	0.2	4,850	308.9	6,758	316.6
18	0.1	5,300	337.6	7,384	346.0
19	0.1	5,850	372.6	8,754	410.2

\* Only for workers who have worked at least 150 hours during the month (tariff level 1, tariff wages listed as being at the median of the spread).

Table 11. Average Monthly Wage in Selected Blue-Collar Trades (Including Operating and Service Personnel

Trade	Average Monthly Wage in Kcs		Trade	Average Monthly Wage in Kcs	
	From	To		From	To
Miner	5,700	8,100	Auto mechanic	2,100	3,400
Steelmaker (metallurgy)	3,800	5,800	Painter, interior		3,100
Foundry worker	2,900	5,500	Roofer		3,100
Lathe operator	2,300	4,800	Mason		3,100
Operating millwright (fitter)	2,100	4,700	Boiler operator		3,000
Railroad dispatcher	3,600	4,600	Route delivery driver		2,900
Printer	2,500	4,100	Waiter	2,100	2,900
Reinforced-concrete worker	3,200	4,000	Watchman	2,000	2,600
Cargo truck driver	3,000	3,800	Post office counter worker	1,900	2,500
Railroad worker	2,800	3,800	Weaver	2,200	2,500
Butcher, meatcutter	2,700	3,800	Postal carrier	2,000	2,300
Plumber		3,500	Chambermaid	1,900	2,200
Passenger automobile driver	3,000	3,500	Sales clerk	1,900	2,100
Cook	2,000	3,400			

5911

CS0: 2400/373

## BRIEFS

TRADE WITH MONGOLIA--Ulaanbaatar (ADN)--On 21 July the governments of the Mongolian People's Republic and the GDR agreed on the mutual commodity exchange and payments in 1987. The relevant protocol was signed by deputy foreign trade ministers Eduard Schwierz and (Nadmidyr Bawuu). The GDR will deliver, among other things, machinery and equipment for light industry and the foodstuffs industry, products of electrical engineering and electronics, of scientific equipment construction, and of the chemical industry, and will receive mining products, leather and velour fur clothes, carpets, wool, and other animal products. [Excerpt] [East Berlin NEUES DEUTSCHLAND in German 22 Jul 86 p 2 AU] /12624

COOPERATION WITH THAILAND--On 7 August the fifth meeting of the joint government commission of the GDR and the Kingdom of Thailand concluded in Bangkok with the signing of an agreed protocol on the further development of trade and economic relations. The meeting discussed projects of further cooperation. The GDR will supply engineering products and electrical engineering and electronic products and will import agricultural products. [Summary] [East Berlin NEUES DEUTSCHLAND in German 8 Aug 86 p 2 AU] /12624

CSO: 2300/524

## ECONOMIST POPOV OUTLINES NEEDED CHANGES IN SYSTEM

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 9-11 Aug 86 p 2

[Interview with Dr Zoran Popov, economist, by Drago Brdjar: "An All-Inclusive Reform Is Too Much for the Economy"; date and place not given]

[Text] The difficult economic situation this year, with the high rate of inflation as the principal feature of that condition, indicates that the economic crisis is deepening. Organizations of associated labor have less and less working capital of their own, changes are not taking place in the quality of business performance and in the quality of production and services, the financial results reported by OUR's do not reflect the true state of affairs, and the accounting system is making it possible for property to be siphoned off into current expenditure. It has been announced that the essential causes of the crisis will be tackled in the fall. It will not be sufficient just to make changes, the changes have to be the right changes if the door to prosperity is to be cracked open at all. Dr Zoran Popov, well-known economist, talks about what the fall package should contain for the readers of PRIVREDNI PREGLED.

[Question] How do you evaluate the current economic situation and the current economic measures of the federal government?

[Answer] The economy is in a phase of deterioration of all parameters and under the threat of a complete collapse. If no measures whatsoever were taken, the collapse would inevitably occur at the end of this year or the beginning of next year. There are no prospects that the situation in the economy will undergo any essential change over the long run. The economy could in fact augment production minimally, but there will be no lasting return to high growth rates.

### Recovery Is Possible

This, of course, does not mean that there will be no recovery. Recovery is possible, but through the present business and economic system. Changes are needed, after the pattern of those presented in the Long-Range Economic Stabilization Program. The current measures of the Federal Executive Council should be seen in that context. SIV has concentrated on preventing a general economic collapse, and by all appearances it will be successful in that. What

SIV is doing, however, is pure alchemy. The orientation mainly toward credit and monetary policy is indicative of that. As is well known, this is an instrument for the fine tuning of economic flows, for correcting slight irregularities. Fiscal policy must be used to have an impact on deeper disturbances in the economy. But the federal government at present has no control whatsoever over that set of instruments, and that accounts for the chronic ineffectiveness of economic policy. Much the same is true of the technical changes in the accounting system--certain improvements can be achieved, but not essential changes.

Interest rates are a typical example in this regard. The essential thing is not whether the rates are to be 76 percent or 46 percent. Interest rate policy can be successful only as a segment in a composite package of measures. In isolation it can hardly change anything, since the effects are soon lost in the conditions of the system that have gone unchanged. So long, then, as the federal government is unable to adopt complete packages and take full responsibility for them, no major developments in the conduct of economic policy are possible.

[Question] The situation at the moment is opening up three possibilities: to maintain at least the appearance of the status quo, to take up the so-called program of the economic reform, and finally, to initiate radical changes in order to raise efficiency. Which possibility is the most realistic in your opinion?

[Answer] It follows unambiguously from what has already been said that a thorough revision of the economic system is indispensable. The goal must be to arrive at a solution that will consistently respect the basic characteristics of the socialist self-management model of business activity. It must, however, be taken into account that the economy is in such a problematical condition that it probably would not be able to withstand any abrupt, major, and all-encompassing reform. Such a reform could have the effect of a seismic catastrophe for it. It would be more proper to carry out the changes in two stages. In the first stage one should eliminate the remaining solutions which have gone wrong so as to diminish the numerous restrictions which are holding back the economic mechanism from more efficient functioning. In the second phase there would have to be deeper, but gradual reforms of the various segments of the economic system, but on the basis of alternative approaches well-studied and prepared in advance.

[Question] What are those segments of the economic system that should undergo reform?

[Answer] By and large they are what is referred to in the Long-Range Economic Stabilization Program. The essential thing is in fact to create the conditions in which the enterprise will effectively and efficiently concern itself with production, and the government will concern itself with social welfare policy, the enterprise will be a responsible entity, and the government will not interfere in its business operation, capital will circulate freely, the country will have a single market.... All of those are key issues of the economic system.

## Two Incompatible Constitutional Principles

[Question] Let us start with the status of economic entities. Under the present conditions they neither are, nor can they be truly independent and economically responsible. The most complicated problems of the economy arise out of that status. What ought to be changed in the system in order to change the status of enterprises?

[Answer] Economic entities should be relieved to the maximum of legal obligations to adopt a one-sided organizational structure, they should be left the greatest possible freedom to adjust their organization to the requirements of production organized in a modern way, the requirements of the domestic and world market, the requirements of technical and technological progress.... Otherwise the independence of economic entities is seriously threatened, and their competitiveness on foreign markets is thereby threatened as well.

The organization of business life in what we refer to as large economic systems is a special problem. It is distorted in the true sense of the word. Nowhere in the world is this kind of system organized in the same way as all other enterprises, so that it is our practice that has to change. The principal characteristic--that they be unified for the country as a whole--must also be respected in the way they are organized.

[Question] The problem of the unity of the domestic market is perhaps the most complicated one because of its direct connection to the political system. What sort of changes are indispensable in this part of the system?

[Answer] Experience to date has shown that the two constitutional principles on which our economic system is based--the economic sovereignty of the republics and provinces and the unified Yugoslav market--are to a large extent, if not altogether, mutually exclusive. The principle of the economic sovereignty of the federal units presupposes a common market, that is, that only economic issues of common interest be resolved by agreement at the level of the federal state. The constitution in fact spells that out, even though this solution is placed in the context of the features defining the unified market. However, the unified market presupposes that economic functions to equalize the conditions for the conduct of economic activity would be located at the level of the federal government, the set of instruments of the economic system would be defined, and development policy and economic policy would be conducted there. Only in that way is it possible to guarantee free circulation of goods, services, labor, and capital, a unified economic system, and a unified development policy and economic policy.

Changes of this kind in the economic system will have to be directed toward revising the economic functions of sociopolitical communities in such a way that the three functions mentioned above would be located at the level of the federal state. However, the guiding function of the social community and the intervention of the government can only extend to the following segments of the market: energy and the major transportation infrastructure, essential foodstuffs, and finally, those products which constitute the backbone of the national economy, the skeleton of its development strategy. The guiding

function must by no means extend to all other products as well. The practical intervention of society would be restricted to those segments of the market and the production process where it is indispensable and where it can be effective.

#### The Fiscal System as an Instrument of Economic Policy

[Question] The federal government has also announced for the fall the first significant changes in the tax system. You have already indicated that there can be no recovery without changes in this segment of the economic system.

[Answer] The present fiscal system has two basic shortcomings: it is too decentralized, and it does not have true fiscal characteristics. This makes it practically unusable as an instrument of economic policy. The changes of the fiscal system would have to begin with its basic function in every present-day economy so as to equip itself to effectively perform its principal role. The principal role of the fiscal system in business life as presently organized is that it be an instrument of economic policy whereby the rough regulation of economic flows is accomplished, and conditions for the conduct of economic activity are equalized or differentiated. The fiscal system should also be adapted to the performance of secondary functions (social welfare policy, the financing of noneconomic activities, and so on), which must also be borne in mind when the new system is worked out. The fiscal system must also respect the fact of the federal system and other specific features of the country, but not to the detriment of its basic function. And the simple reason for this is that economic policy, especially in the domain of stabilizing economic flows, will remain ineffective if it continues to be thwarted in making use of the set of fiscal instruments. And that set of instruments could in fact be the key instrument of anti-inflation policy, since it is not possible to conduct an effective policy governing income, its distribution, and redistribution without fiscal instruments.

Revision of the fiscal system would have to be based on several initial premises. First of all, it must be regulated in a uniform way for the entire country in all its essential elements. The republics and provinces and to some extent even the opstinas would have to have a certain system of fiscal independence, but not such as to destroy the measures of economic policy of the country or to essentially destroy the uniformity of conditions for conduct of economic activity. The fiscal independence of the SIZ's must be eliminated. Possible fiscal integration and independence of the SIZ's must be treated as a part of regional fiscal independence. Of course, the conduct of fiscal policy would have to be governed by the same principles.

[Question] How is the financing of the operation and development of noneconomic activities to be organized under those conditions?

[Answer] The free exchange of labor has not shown any advantage whatsoever, but it has produced numerous undesirable effects as compared to the previous mechanism. This portion of the fiscal system has become unusable as an instrument of economic policy, the burdens on the economy have been increased unnecessarily, and at the same time the coordinated development of noneconomic activities has been prevented.



That is why we should look at the suitability of abolishing or rigorously tightening up this mechanism of the economic system. Its functions could be taken over by government bodies, whose organizational structure continues to exist alongside that of the SIZ's, in order to take the burden off the economy.

#### The Unique Function of the Plan

[Question] The system of planning has also displayed chronic ineffectiveness, which is an indication for fundamental changes. In what direction?

[Answer] The revision of the system of planning, in view of the weaknesses which have been indicated, must start with clearing up ideas about the place and role of the plan at the level of the country as a whole, but on the basis of prior resolution of issues concerning the concept of the unified Yugoslav market and a somewhat different distribution of economic functions among sociopolitical communities. Otherwise it is not possible to define an optimum and efficient system of planning, since it must respect the solutions contained in the system concerning the organization of economic life as a whole.

The additions to the planning system must start with elaboration of the procedural aspects of the preparation and enactment of the country's social plan, the jurisdiction of all entities who participate in this, the content and jurisdiction of the plan of the country as a whole, responsibility and powers in carrying out the social plan, relations between the national plan and the development plans of the republics and provinces, and also the relation between the plans of economic entities and the plans for development of sociopolitical communities. The set of instruments for carrying out plans must be precisely defined, and its use would be coupled with responsibility for the fulfillment of plans. The purposes of a planning system set up in that way are clear in and of themselves.

[Question] The concept of social ownership is certainly the most controversial issue. The present treatment of social ownership of assets has shown up numerous and large shortcomings. On the one hand the insensitivity to all other forms of ownership which guarantee the most efficient use of assets is justified by preservation of the system of self-management. What do you see as the way out of that cycle?

[Answer] Social ownership in our country is based on the nonproperty treatment of social property, which implies that socialized means of production belong to everyone and no one. By the same token it has not been possible to elaborate features concerning the obligation to preserve and augment social resources. This is even passed over to income and to its distribution and expenditure. Opportunities have been created for a portion of social resources to be siphoned over into expenditure by way of labor and the results of labor. There have also been other adverse economic consequences.

The changes have to start with the constitutional principle that social resources are turned over to economic entities for management under the same conditions. This definition can be implemented in operational terms through

the system for financing expanded social reproduction, and that in such a way as not to bring about institutionally imposed differences in the conditions for the conduct of economic activity, but rather differences arising out of the way in which investment projects are financed. In practice this means that the financing of investment projects must be regulated by additional institutional construction regardless of whether the concept of the pooling of labor is taken further or in some other manner. Here there must be a mechanism furnished for effective concentration and mobility of capital and for accessibility of the capital to all economic entities under the same conditions. This means that the financing of investment projects must be worked out uniformly both in terms of the system and its institutions. There also has to be consistent implementation of the principle of revaluation and valuation of social resources as well as the introduction of a new instrument in the business system--the accumulation parameter, which would broaden the intervention of society into the domain of the distribution of income, accumulation, and expenditure. Now that domain of distribution has been exclusively left to decisions of work organizations, and that has strengthened group-ownership relations in distribution.

7045

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## CREDIT-MONETARY PROBLEMS, INTEREST RATES DISCUSSED

Belgrade EKONOMSKA POLITIKA in Serbo-Croatian 18 Aug 86 pp 19-20

[Article by Tomislav Dumezic: "Financial Consolidation: Real Money Instead of a Phantom"]

[Text] We shall soon see whether the Federal Executive Council and other bodies vested with authority will have the strength to make the right moves, moves that within the context of a fundamental reform of the economic system will help to establish a reasonable pattern of money holdings and to address the foreign debt and obligations to the personal sector. One thing is certain--the conduct of economic activity under the present conditions, in which enterprises are barely covering slightly more than 10 percent of what we refer to as permanent assets from their own sources (the remainder of nearly 90 percent is made up of credits and unmet obligations), can only reproduce ever higher inflation and accentuate the uncertainty of business organizations and individuals, the lack of interest in development, the declining quality in economic performance and the siphoning over of income.

The dropping of interest rates on deposits and credits, which has been done by the Federal Executive Council, does not signify any essential change at all. The growth of inflation drops only temporarily--temporarily since the amount of outstanding credit (both because of inflation and because of the increased inefficiency with which money is used) will grow very quickly. This is indeed proven by the figures of the Social Accounting Service of Yugoslavia. As of 31 March of this year the economy was using credit in the amount of 9,625 billion dinars. Interest was paid in the amount of 727 billion dinars over the first 3 months. The average amount of outstanding credit this year will considerably exceed the sum of 10,000 billion dinars, which means that the interest paid will also exceed the amount of 4,000 billion dinars and will equal the total amount of net personal incomes paid out to the entire labor force employed in the economy. This is happening at an average rate of interest which is below 40 percent and does not cover even 50 percent of the devaluation of the principal by inflation. We have, then, a low rate of interest (more accurately--there is actually no interest; the owners of the money are losing, and the users are gaining), and yet it is a source of inflation.

## Enterprises Without Money

A majority of the economists on the public scene, joined by quite a few specialists and political figures--in fact see a source of inflation in the fact that interest rates have been considerably lower than the rate of inflation. That is, when the price on money is negative, money is used inefficiently and inefficient investments are made, since every credit pays off, and saving money is a losing proposition. This is true in principle, it is just that this fundamental position pertains to a different society and to another economy in which both goods and money have an owner. Then it does not matter whether the owner is an individual, a group, a large number of unknown citizens, or the government. Would inflation perhaps be lower if the rate of interest on credits today were, say, 95 percent (that is what it would have to be to be positive)? Of course, it would not be: in fact it would be somewhat higher. This has in fact been proven by economic trends up to this point, and this is also confirmed by figures on the pattern of ownership. Given the present pattern of money holdings, given the present accounting system, and given the motivation of economic entities, things really could not have developed differently. Average inventories of raw materials, supplies, work in process, finished products, and goods in the trade sector will amount to about 8,000 billion dinars this year. The money of its own which the economy possesses for these purposes amounts to slightly more than 1,000 billion dinars. The remainder is covered with the resources of others (bank credit, credit from other enterprises, and unmet obligations to creditors). Is it possible that inflation might be lower at an interest rate of 95 percent? Certainly it could not be lower, especially since expensive money cannot in our context bring about a reduction of inventories and a faster turnover of assets (raw materials are purchased for a longer period when they are available, the production process is protracted because components are lacking to finish products, the accounting system makes it possible for financial results to be presented unrealistically, and the penalties when a loss is shown are minimal).

How is it that enterprises are left without money of their own to finance current business operation? There are two principal causes--the high rate of inflation and the inappropriate accounting system. About 7 or 8 years ago the economy on the average covered 50 percent of permanent working capital from its own sources (the portion of the business fund for working capital). Rising inflation has steadily devalued that portion of the business fund. The lost value of the money was indicated as a portion of income, whereby all forms of expenditure increased--government, social service, and personal. The revaluation of capital assets is mandatory in the economy. The significance of revaluation is that depreciation is computed on a more realistic value. Since the average rate of depreciation is less than 10 percent, it follows that if an enterprise does not revalue capital assets annually, it loses one-tenth of the value not revalued. If it does not revalue money, then it loses the entire value of money not revalued, that is, whatever the rate of inflation amounted to that year. This is exactly what is constantly happening in the economy. When the rate of inflation was between 10 and 20 percent, this could be offset if there was a certain amount of accumulation. Now that inflation is ranging between 60 and 90 percent and accumulation is dropping, it is not possible to make up the value of working capital. That is exactly how

enterprises have been left without money of their own to finance current business operation. As the value of that portion of the business fund has dropped, the role of the government in financing the economy has increased, primarily through credits extended on the basis of primary note issue. In this way the government realizes enormous revenues which in quantitative terms may in this year come close to the total legal revenues of the federal budget.

Instead of adapting the accounting system to the conditions of inflation, the wrong changes have taken place: The revaluation of inventories has been made mandatory, which only increases the inflationary pressure. One particular problem is that economic organizations are unable to cover losses on the basis of the fictitious growth of the value of inventories. Every financial consolidation of the economy presupposes a prior drastic change in the pattern of ownership, since it is simply impossible to do business when 90 percent of resources for the standard volume of production and services must be obtained from outside. It would be logical for the economy to obtain money by selling off a portion of its property in the form of capital assets (issuing debentures, shares of stock, or some other form of securities). The question here is who would figure as the purchaser of these securities, that is, who has the money? These might be foreign organizations which are now creditors (in which case some of the obligations based on credits might be turned into joint ventures), our own personal sector, and the government. Since in practice there are no realistic possibilities for this kind of transmission of property, the only possibility that remains is for all the credits extended on the basis of primary note issue to be transferred to the permanent ownership of business organizations according to some sensible criterion that would be established. This kind of operation could have an anti-inflationary effect provided the economic system adapts to certain rational goals and at the same time the accounting system is changed. Increasing the money portion of the business fund, when at the same time positive interest rates are introduced on time deposits and credits, would only reduce the amount of money the economy spends for interest. Certain other problems would arise. Reducing the receipts of the national banks (and revenues of the government) would eliminate sources for settling a portion of obligations abroad and to the personal sector as well as sources for the siphoning over of income within the economy. Here only the first two sources are a problem, and they should be made up for from certain other real revenues.

So that the growth of the money portion of the business fund does not bring about an automatic growth of inventories in the economy, the accounting system ought to be changed. Perhaps economic organizations might be required to cover every increase of inventories at the end of the current period as compared to the beginning of the period out of the income realized over the period.

#### Two Real Problems

All the measures aimed at what is called financial consolidation of the economy, at redistribution of property, and so on, are unable to resolve two real problems--obligations to the personal sector and obligations to foreign creditors. It might be said that almost all the problems today, especially inflation, have roots that lead back here.

Most of the foreign exchange savings of individuals (this is probably an amount in the neighborhood of \$7 billion, that is, 2,800 billion dinars) has in the end been spent unproductively. Thus foreign exchange savings, mainly through sales of foreign currencies on the foreign exchange market, have been used to cover a portion of the trade deficit. Since foreign exchange savings is not even close to being enough to cover the trade deficit and the deficit in the balance of payments, especially over the period between 1977 and 1980, the remainder was covered by borrowing abroad.

A large portion of foreign financial credits has also been spent unproductively. A portion of these resources was used to finance personal consumption; a portion of resources were invested to finance projects in the infrastructure, while a portion of credit was loaned out unprofitably for production facilities in the economy. Since there are no real debtors liable for most of these obligations, the real problem arises of a way of finding sources of resources to pay interest (and in part to repay the principal) on these credits. It is difficult to ascertain exactly how much is involved. Probably this is an amount in the neighborhood of \$15 billion, which exceeds 6,000 billion dinars.

This loss for Yugoslavia is located in the banks and in business organizations. A considerably larger portion of this loss is in the balance sheets of banks (we are perhaps talking about an amount exceeding \$10 billion), while the smaller share is indicated on the balance sheets of economic organizations. It can even be said that it does not essentially matter where the loss is indicated. The essential thing is to ascertain the following: nothing essential can be achieved by any writing off of exchange rate differences for individual enterprises, industries, or regions, by any sort of transfers of exchange rate differences from accounts of the National Bank to the Federation or by similar bookkeeping operations. The real debtors and real sources of revenues to pay both interest and principal have to be found.

#### Possible Solutions

There can be no dispute that the economy has lost most of the business fund which was earmarked for financing current business operation precisely because of the high rate of inflation, the principle of nominalism, and the inappropriate accounting system. For the same reasons the economy also made certain gains. This primarily applies to the obligations of the economy to domestic creditors on long-term credits for capital assets and for capital pooled on long term. Enterprises reassess capital assets by applying the prescribed revaluation coefficients. However, the obligation arising out of credits remains at the same nominal level, which means that it is diminished at least in proportion to the difference between the rate of inflation and the rate of interest on long-term credit. And that difference is immense, since the average rate of interest on credits for fixed assets from domestic sources barely exceeds 10 percent. This means that there is room for a portion of obligations abroad to be passed over to the economy as their long-term credit, and here the term for repayment of the credit would have to be adjusted to the obligations abroad and to the plan for rescheduling those obligations.

A portion of the obligations would have to be transferred to the personal sector, but only indirectly. Sociopolitical communities--the federal budget and the budgets of the republics and provinces--would have to be those directly liable. And real sources of revenues have to be found to cover those obligations. They can neither be resources obtained from primary note issue (interest-free credits of the National Bank not to be repaid), nor may they be revenues realized through the turnover tax. Both forms of building up resources would cause a rise of inflation. There remains, then, only one source--direct taxes that would be related to taxation of current income and (possibly) property of individuals.

Neither the transfer of credits from primary note issue to the economy nor transfer of a portion of the obligations abroad and to the personal sector to business organizations and to the budgets of sociopolitical organizations, nor changes in the accounting system can yield any lasting constructive benefits in the context of the present basic arrangements in the economic system, in which the workers do not bear any direct financial risk and do not receive appropriate resources in proportion to the results achieved. Here the financial result ought not to depend on the administrative decisions of those in power, but ought to be realized on a market that is also relatively open to foreign goods.

7045

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## COMPUTERS UTILIZED IN SIMULATOR TESTING

East Berlin MILITAERTECHNIK in German No 4 1986 (signed to press 8 May 86)  
pp 184-185

[Article by Lt Col Graduate Engineer K.-H. Otto: "Microcomputers in the Standardized Gas Turbine Simulator"]

[Text] 1. Re the Development of Computer-Assisted Simulators

The electronic computer technology is taking over ever new operating areas at an unprecedented pace. Its "most recent baby," the microcomputer, has given added impetus to this trend, indeed led to a revolution in computer utilization.

Because of its significant volume and cost reduction, as compared to previous computer generations, the microcomputer makes possible its decentralization as well as complete integration of equipment and computer. And also because of this, it has become possible to utilize computer-assisted simulators effectively for training purposes. They raise to a higher power the advantages of conventional simulators, because the development times and costs for the hardware can be significantly reduced and the utilization possibilities perceptibly expanded.

The use of microcomputers in simulators presupposes, however, that the problem to be solved can be structured into a sequence of partial functions, the basic feasibility of which with the aid of computers is known. At the core of the problems to be solved in the design of computer--assisted simulators, therefore is the algorithmation of the simulation task. The following approach has proved its worth in the design of computer-assisted simulators:

-- Identifying the Problem

This is primarily the task of the user (consumer). The objective must be to describe the problem to be solved as completely as possible, and to define the qualitative conditions (above all, the critical real-time conditions). In this stage, therefore, the simulator to be developed determines all requirements, independently of the computer.



## -- System Design

The system design includes the selection of both the hardware and the software. The essential element is the structuring of the problem. It is solved by algorithmation of the simulation task.

In this phase both the consumer and the producer must take on tasks. The algorithmation is done by the orderer for the sake of expediency. With respect to the hardware, the type of microcomputer to be employed is determined already at this stage, as a function of the required process sequences and the necessary storage capacity. The development of the hardware then concentrates primarily on the peripheral equipment and the design of the input/output components. Optimal coupling conditions must be created between the computer and the simulator.

## -- Programming

This step includes the transformation [conversion] of the simulation algorithm into the computer-compatible language (development of the software). That is exclusively the duty of the producer. But in this phase too the continuing contact between the consumer and the producer is beneficial in achieving an optimal balance of effort and yield.

An example of the application of microcomputers in standardized simulators will be described below.

### 2. Gas Turbine Simulator on a Computer Basis

On the Basis of a newly developed and constructed gas turbine simulator, the firm VEB Geraete- und Reglerwerke [Equipment and Control Plant GRW] Leipzig produced the computer-assisted gas turbine simulator GTS 83. Through the design teamwork of users and development engineers, a device was built which in its essential performance parameters far exceeded the original concept. Thanks to the utilization of the microcomputer system of the GRW Leipzig, it was possible, above all, to significantly expand the pedagogical-methodical possibilities of the training apparatus as compared to those of the planned model. At the same time, the technical reliability and the operability were perceptibly improved.

#### 2.1. Purpose and Advantages of the Simulator

Gas turbine-driven power generators (output from 20 to 100 kW) are being used to an increasing degree for supplying power to the mobile combat technology equipment of ground forces surface-to-air missile troops.

The training of generator personnel utilizing original equipment involves large material-technical and financial expenditures. This resulted in actual curtailment of the training possibilities. Specifically, practical operator training had to be reduced. Training under simulated equipment damage conditions could not be carried out at all because of the complex technical functional nexus. For the training of one generator attendant alone, an average of 2000 liters of fuel were required.

When working with the developed gas turbine simulator GTS 83, none of the methodical and military-economic disadvantages associated with the utilization of the original equipment apply. The GTS 83 makes possible the complete simulation of the functional phases of all gas turbine-driven power generators used in troop air defense. The following functional programs were put into practice:

- preparation for starting;
- cranking up the gas turbine in a cold state;
- starting the gas turbine;
- normal operation of the gas turbine;
- turning off the gas turbine;
- switching the power generator to traction motor drive;
- parasitic current connection.

The microcomputer system utilized makes it possible to satisfy extensive didactic-methodical demands. The most important are:

- reducing the amount of unproductive time spent for training preparation and knowledge and skill checks;
- utilization of elements of the algorithmic programming and transformation of the analytical-synthetic methods;
- reducing the economic expenditures;
- training of all operational and control processes in all functional phases;
- simulation of a comprehensive fault and damage program on the basis of prophylactic model situations;
- optimal realization of the didactic functions of vividness and comprehensibility, realism and repeatability;
- development of high psycho-motor stability;
- training of the typical intellectual psychic characteristics attentiveness, imagination, and power of observation, as well as mental agility.

Aside from the training effect described above, the use of simulators leads to a perceptible reduction in the operating hours of the original equipment and, through a saving of technical resources as well as fuel, to a significant reduction of costs per hour of training. And so today only 3 percent of the practical training is still done on the original, compared to 75 percent on the simulator; the gas turbine operating hours required for training decreased to 1 percent and the operating costs per hour of training decreased from M 500 to M 0.10.

## 2.2. Structure

The simulator was conceived on the basis of the microcomputer system of VEB GRW Leipzig. Input/output components tailored to the application assure the

desired operating and response routine for a realistic functional simulation of the original technology.

The GTS 83 consists of:

- the electronic unit (standard);
- the instructor desk (standard); and
- the student desks 1Ae3/7, 1Ae4, 1Ae5, 1Ae6, 1Ae27.

The electronic unit is accommodated in a double box of the EGS [not further identified] system. It contains the components of the microcomputer system, the input/output components, the power supply and the control equipment. It controls the simulator in all functional phases.

The instructor desk is located inside a simple, standardized box. Installed in the front panel are control elements for regulating and monitoring the training process.

In support of one's own control inputs, to show the operating condition of the power generator, and to monitor the student, there is an 8-digit, 7-segment display board. The data shown appears either automatically during operation (spontaneous fault indication), or it is requested via a keyboard (indicator functions). Also with the help of the keyboard, test functions, faults and operating conditions are composed (composition functions).

It consists of a command keyboard (red), the function keyboard (colorless), and the number keyboard (yellow). Inputs are usually made by means of input variants, whereby several keys must be actuated in sequence. The "Ex" key represents the termination. Incorrect inputs are for the most part identified and are acknowledged with the display "FEHLbEdG."

The manifold usefulness of the display board simplifies the operation of the simulator. At the same time it can be used as the display element of the computer-assisted clock. It can be used as a normal clock (hours, minutes, seconds) and as a stopwatch with resolution into fractions of seconds for measuring reaction times.

The student desks are likewise accommodated in standardized boxes. Their front panels are replicas of the control panels of the original technology.

All control elements, including the measuring instruments, areas regards their situation allocation patterned after the conditions of the originals. They are fully functional, with their operating conditions being controlled by the microcomputer.

### 2.3. Basic Mode of Operation

The electronic unit performs the central signal input/output. All outputs for the signal lights and measuring instruments of the desks, as well as the signal inputs of the keys and switches, are processed by input/output circuits and fed to the microcomputer or transmitted by it.

The entire function simulation is exclusively determined by the software of the computer system.

### 3. Utilization Possibilities

The simulator can be successfully used for the development of complex behavioral patterns of generator data in the operation and monitoring of gas turbine-driven power equipment. The use of microcomputers assures a good methodical effectiveness of the simulator. When utilized continuously, a high level of training results and minimal costs can be achieved.

While preparing for the training, the instructor can concentrate on the methodical [systematic] procedure. Relationships with respect to content are established by the simulator, which carries all programs.

The technical special features largely determine the methodical-didactic penetration of the training. The training is effective only if these special features as compared to training on the original equipment are taken into consideration.

This short insight into the development and utilization of computer-assisted simulators makes clear the advantages of the linkage of computer and simulator technology for combat training.

The integration of microcomputers and simulation systems should be used to a greater extent than in the past, in order, as demanded in the report of the political main administration to the 14th delegate conference, to achieve a genuine breakthrough toward increasing the effectiveness of combat training. One prerequisite for this is that user and producer work together more closely, but also that the numerous possibilities of modern computers be more popularized.

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## BENEFITS OF TECHNICAL TRAINING EXPLAINED

East Berlin MILITAERTECHNIK in German No 4 1986 (signed to press 8 May 86)  
p 176

[Article by Lt Cmdr G. Pohl: "High Level of Training--Important Prerequisite for Avoidance of Damage and Losses Involving Combat Technology"]

[Text] One of the experiences made in recent years is that a high proficiency level of the personnel is essential in the machine [mechanized] combat sector on RS [optical sight?] and POL (petroleum-oil-and-lubricants) boats for the trouble-free operation of the drive and power generating equipment. In this way, after all, damage and losses can be averted in Combat Sector V. It is for this reason that we turn our attention again and again to training.

At the focal point of the training is the capability of every member of the combat sector to cope completely with his specialty function. That can only be achieved over an extended period of time and demands a high level of activity and initiative from those involved, the superiors, instructors and trainees.

Using newly assigned personnel as an example, it will be explained below what steps are being taken by us in order to qualify them rapidly for the performance of their function aboard the ship.

Twice a year, young sailors and mates come to us, just as elsewhere in our armed forces. In the course of their training on land, they have acquired various kinds of theoretical and practical knowledge. However: a boat is neither a classroom nor a lecture hall. For that reason, we begin by familiarizing them with the accommodations on board and the requirements in effect here with respect to health, work, fire and environmental protection. At the same time, the newly assigned personnel become familiar with the most important facilities on board, and they begin to get established in their combat sector. Their start is made easier by older sailors and mates, whose wealth of experience is thus handed down from crew to crew.

For the specialized technical training, the best qualified instructors are used. They pick up where the knowledge already acquired on land left off, and step by step they lead the new assignees into their specialty

functions. Aside from refreshing and expanding their theoretical knowledge, the training concentrates primarily on courses of action. At the focal point in this process is: how the equipment is to be put into operation; how it is to be kept operating; what must be done/avoided/reported if a problem arises; or how is a piece of equipment to be turned off.

In this first phase of on-the-job training, the initiative of youth ("combat-ready in the shortest time possible") plays an important role. It helps in rapidly acquainting the "new arrivals" with their duties, and it ends when every new assignee is certified for the performance of his on-board function.

The attained knowledge and skill level is followed by continued training for everyone. For is it not true that the universal mastery of combat technology, armament and equipment is a never ending process? In addition we direct our attention to a higher level of requirements; in line with this, procedures are now perfected jointly, so as for the most part to eliminate operator errors.

Mainly operator errors have frequently been the cause, in the machine combat sector, for equipment damage which resulted in lower technical combat readiness. A valve that was not actuated, or a switching carried out in the wrong sequence cannot be dismissed as minor. Perfection and the automation of the actions have an additional effect on combat readiness: the norm times become easier and easier to meet and are frequently bettered.

Our best instructors have long since recognized that, in training someone to appreciate and have confidence in the technology, there is considerable room for developing a sense of responsibility. The operators act more purposefully, with more foresight. They demonstrate that in every combat training and in every combat duty the technology lives up to the expectations placed in it.

We know that despite all efforts, problems can crop up even in our combat sector. For that reason, a significant share of the theoretical and practical follow-on training is devoted to the recognition of problems as well as the rapid and effective elimination of the consequences of a problem. Here too we fall back on many years of practical experience in the correction of problems utilizing on-board resources.

Once the new assignees master all the things discussed above, we give them new, more far-reaching tasks. They are gradually introduced to the duties of a second functional specialty. In this way we attain a multiplicity in the availability of individual crew members, which has a positive impact on replaceability and motivation.

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## CAPABILITY OF MILITARY PILE DRIVERS DISCUSSED

East Berlin MILITAERTECHNIK in German No 4 1986 (signed to press 8 May 86)  
p 180

[Article by Maj Engineer-Economist M. Fabian: "Training of Pile Driver Operators"]

[Text] For pile driver training, our branch of service has available to it the heavy pile driver ferries SRF 500 and SRF 1250.

The heavy pile driver ferry SRF 500 serves for the installation of posts in standing and flowing waters as well as on land. It consists of the pile driver ferry unit, the working platform unit, the towboat BMK 130 M, and the transport vehicles. It can be used to drive wooden posts having a post mass of up to 800 kg vertically and obliquely, support structures for railroad and vehicular bridges, as well as for special purposes (sheet pilings, mooring posts [bollards]). It is usable in minimum water depths of 0.5 m, a current velocity up to 2 m/sec, and a wind velocity up to 10 m/sec. The necessary joining work, the application of crossbeams, and the fastening of walings and lateral trusses are possible with the working platform unit.

In addition to pile driving, the SRF 1250 permits ferrying and crane operations as well as its utilization as a bridge element in conjunction with the ponton bridge depot PMP. The overall complex of the SRF 1250 consists of the pile driver ferry unit, the TATRA 148 transport vehicles, the BMK 130 M towboat, and the land pile driving equipment USA with ADK KS 4561. The pile driver ferry serves for driving wooden, steel, steel concrete, prestressed concrete, and composite posts as well as Larssen sheet piles up to a maximum inclination of 1:4 in two levels. The ponton unit (six pontons without pile driver superstructures), with a load-carrying capacity of 25 tons, can be used as a crossing ferry and as a crane ferry for the assembly of support structures. The joining work is done with the working ferry (two pontons) and the fitted cross frame insertable equipment QSG 300.

The design of the pile driver ferries and the unique aspects of their utilization place high demands on the training of the pile driver mechanists.

An experienced instructor explains at the beginning of the training the importance of pile driving for military bridge construction. A visit to the "Military Bridge Construction" training area has proved to be worthwhile.

Here the trainees can become acquainted with the various types of pile yokes and their design. Thereafter they are familiarized with technical and technological details as well as safety regulations.

The showing of slide series, depicting the pile driving technology as a whole or in individual subassemblies, increases the vividness and comprehension. To be highly recommended is the training film "Heavy Pile Driver Ferry SRF 500."

The theoretical training, consistent with the overall training program, concludes with an examination of the knowledge acquired. The subsequent practical training begins with an introduction into the technology and initially is instructional-methodical in nature. Required for this are level areas, adequate space between the individual elements, and complete safety during the required crane work.

The practical training is carried out by stations, so as to make mutual replaceability possible. This makes it possible later on to select the most capable machinists for each job and prepare them for their future utilization.

For additional practical training, the troops and pile driver technology deploy to the water training area for the purpose of continuing the training in flowing water. The training concludes with the norm test and with activities carried out under complex conditions, e.g., while wearing protective clothing, training at night, or while under simulated enemy attack. Included herein are the establishment of working readiness, the assembly of various sections, the driving posts, joining work, conversion of equipment into different variants and preparing the equipment for transport.

The practice of constantly increasing the demands on the trainees and making the training increasingly complex has proved its worth. In addition to complete mastery of the pile driving technology, this assures the development of lasting skills for the employment of the pile driving equipment under combat-like conditions. Noteworthy is the fact that the readiness to solve complicated tasks increases in line with the degree to which the instructor is able to make greater physical and psychic demands of the trainees.

The training of pile driver machinists on still and flowing waters offers many possibilities for preparing army personnel for operations in combat. In the process, the instructor must always be aware that a well organized training and a convincing motivation of the personnel substantially further the success of training.

In order to further improve the effectiveness of pile driver training, we regularly recertify our instructors in the military-technical sector and qualify them for the political-moral and psychological preparation of their subordinates. The trainees soon become familiar with the goal and scenario of the training. This boosts their willingness to perform all assigned tasks. Conscientious maintenance of the pile driving equipment assures its operational readiness and thus promotes confidence in this technology. And, finally, we are trying to increase the complex nature of the training by means of meaningfully relating it to other training branches.

12689/12947  
CSO: 2300/485



## EXPORT OF ARMS, MILITARY EQUIPMENT DISCUSSED

Zagreb DANAS in Serbo-Croatian 19 Aug 86 pp 15-16

[Article by Miroslav Lazanski : "Weapons : Made in Yugoslavia"]

[Text] At a recent meeting in Trstenik representatives of the Yugoslav military products industry, that is, of the Yugoslav Community for Armament and Military Equipment (ZINVOJ), which includes all work organizations which in addition to their regular production also engage in special-purpose production, the overall contribution which the military products industry is making to the country's technological development was discussed. It was stated that most of the technologies and processes used in the military products industry are general-purpose in nature and are used in the everyday production of the Yugoslav economy, while only 25 per cent of the technologies are classed among those which can be called specific, or, as it is often put, among the "military" technologies. According to the figures given, over the last ten years about 35 per cent of the scientific results and developments of the military products industry have been directly applied in the economy, that is, in production which is manifestly civilian and market-oriented.

As Dr Svetislav Popovic, assistant federal secretary for national defense with the rank of lieutenant-colonel general, recently stated, the Yugoslav military products industry is keeping pace with the most up-to-date world technologies, is making a maximum contribution to the country's balance of payments, and is having an integrative impact on the entire Yugoslav economy. Dr Popovic said that there are no republic and provincial borders in the production programs of the military products industry, nor is recognition given to division and localism. As he put it, thanks to better organization and a high degree of cooperation and integration, the capacity of the special-purpose industry is being utilized at a level going as high as 95 per cent, and it is completely fulfilling its production targets in spite of the difficult economic conditions.

It can be said that the Yugoslav military products industry has been developing as an integral part of the socialist social system, and the experience gained in research, development and production have been important to newly built and updated civilian factories, especially in the fields of the metal manufacturing and chemical industries, the motor industry, the electrical products industry and shipbuilding. Production for the market

within the military products industry has been developing since the beginning of the country's postwar development as an integral part of Yugoslavia's planned economic development, so that the military products industry has not turned into the kind of arsenal that might exist in wartime. The years have passed, the Yugoslav military products industry has been mastering the production of weapons which are increasingly modern and have a greater and greater combat capability. Today it takes pride in the new M-84 tank, the M-80A armored combat personnel carrier, the BOV-1 combat vehicle for anti-armor combat, and the BOV-3 vehicle for field antiair defense, the M-77 multiple-barrel rocket launcher known as "Oganj," the G-4 trainer-fighter plane, and the "Orao" fighter-bomber, the "Partizan" antiarmor helicopter, the M-79 bazooka known as "Osa" and the M-80 bazooka known as "Zolja," the new 120-mm mortar, new hand grenades, the M-76 sniper rifle, the new 7.62-mm machine gun, and various types of laser range finders. Domestic shipbuilding has also carried out projects which have been taken note of in the world: the missile gunboats of the "Rade Koncar" series, submarines in the "Heroj" and "Sava" series, new commando submarines, new patrol boats, assault landing craft....

Today we are meeting most of our needs for armament for our armed forces from our own production and by using domestic resources (personnel, raw materials and productive plant) and in that way we are reducing our dependence on imports. At the same time the domestic armament and military equipment industry fully employs Yugoslav industry and the scientific research potential and creates realistic conditions for exporting armament and military equipment. for an inflow of foreign exchange, and for an improvement of the economic position of organizations of associated labor producing that armament. The potential of the Yugoslav military products industry today consists of several dozen very modern organizations with up-to-date equipment which are specialized in finished production of the most modern armament. In addition to those work organizations, there are also several hundred factories which have committed a sizable portion of their capacity to the production of parts, various assemblies and subassemblies as subcontractors of the final suppliers of armament and military equipment. At the moment several military institutes and more than one hundred and forty scientific and development organizations, as well as several civilian institutes all over Yugoslavia are working on the development of armament and military equipment. That potential is located in all the republics and provinces and constitutes a modern and integrated military-economic complex. It manufactures more than 400 different types of armament and military equipment, so that today we are producing practically everything: from complete infantry weapons, artillery of various calibers and ranges, antiarmor and antiaircraft systems, including ammunition, mines and explosives, and communication equipment, to combat and non-combat vehicles, airplanes and helicopters, ships of almost all kinds, and lasers, sighting devices and missile systems....

Taken as a whole, the Yugoslav industry is today manufacturing nearly 90 per cent of the armament and military equipment of our armed forces, and we are importing only sophisticated weapons which can not be produced profitably in the country, since the production runs are small. Incidentally, we can employ about 30 per cent of the capacity of our military products industry on export work, which directly serves our policy of nonalignment. The high regard in

which we are held by the nonaligned countries is an advantage in obtaining this business, since our purpose is to help them without any sort of conditions, which is not the case when certain other countries or blocs sell arms. On the international market for armament the primary demand is for quality products, so that when someone buys some Yugoslav combat system, this means that he has checked it out in competition with all possible similar systems that exist in the world at the moment, that our weapons have proven to be the best in that kind of competition. Aside from that, we are rather flexible in providing training in the handling of these combat systems, and that integrated furnishing of resources is an important factor in the purchase or sale of weapons.

Over just the past five years the Yugoslav armament and military equipment industry has increased its labor force 60-fold, and its exports 2.5-fold.

Work is being done at the moment on several hundred R&D assignments with the help of organizations in the armed forces and the resources of civilian work organizations in this industry. A study has also been made for development of the military-economic complex up to the year 2000. New investments will make it possible to install up-to-date manufacturing equipment and devices, which will improve quality.

Our capabilities for development and operation of new equipment and technology, with 25,000 researchers in modern and sizable industrial plants, are very substantial and have to be optimally utilized. So far the level of technical and technological independence in developing the production of armament and military equipment is higher than in similar branches of Yugoslav industry, all of which indicates that in the future the military-economic complex will be an important part of Yugoslavia's overall economic potential.

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CSO: 2800/351

## DANGERS OF REMNANTS OF RELIGION STRESSED

Tirana BASHKIMI in Albanian 9 Jun 86 p 3

[Article by Hulusi Hako: "The Saints'--Tools of Reactionaries", excerpted from the newspaper KASTRIOTI, organ of the party committee of Kruje District]

[Excerpts] Any trace and manifestation of old remnants in our life, such as religious beliefs, justifiably seems anachronistic and incomprehensible to the younger generation. It is a great ideological victory of the system and of our new life that religious preachings were put in their proper place and a very heavy burden and obstacle were taken away from the minds and backs of our people. However, we realize that those brainbushes which were nurtured and rooted over the centuries cannot be cleared away within a few years.

The cults of dozens of "saints", a relatively large number of names, of individuals, real or imagined, were created over the centuries by former rulers, oppressors, clergy, all representatives of the exploiting classes who proclaimed them saints because of their activities in the service of the forces of reaction, of the oppression and enslavement of the working masses. Religious propaganda has used their residence, temple, or burial place as a "holy place" and prayers directed to them supposedly would help an individual experiencing sickness and other misfortunes. With the most contrived preachings and writings, the clergy have tried to numb the reasoning of individuals, telling them, for example, that even the cattle obeyed St. Francis.

Such cults were propagated in our country by foreign occupiers and they ranged from the cult of the tomb of Ballaban pasha, the cult of Imam Ali, Hasan and Hysen, the cult of Sari Salltek, to the monastery of Kostar or the church of St. Anthony.

Anthony or Ndou, one of those figures whom Catholicism made a saint, as religious writings have presented the situation, supposedly was a Portuguese man from a rich family who brought him up in the faith, who preached that anyone who humbled himself would rise up and become greater, and other things. The believer had to prostrate himself in humility and get up in the hope of Anthony's assistance. This figure was common in churches in Shkoder in the 1930's. Later on, a church with his name was built in Lac.

Despite the systematic efforts of the church to implant religious dogmas and beliefs, our people kept its healthy realistic judgement. This shows that the attitudes of the people in regard to the most important issues have been based, not on fantastic religious subjects, but on the most important concrete aspects of life, the most noble virtues and their real values.

In regard to the dogmas of religion, the saints and any other phenomenon, we have our scientific and political-class judgement and attitude, and we have the teachings of the party. Comrade Ramiz Alia suggests that "behind foreign remnants, behind religious beliefs and backward customs, behind every nonsocialist concept which anyone might espouse, lies the danger of degeneration, the reserve of the class enemy, imperialism and revisionism."

Supported by the light of science, guided by our Marxist-Leninist ideology, by the teachings of Comrade Enver Hoxha, we are strengthening our vigilance and our educational work and we are expanding our ideological and cultural revolution.

/13104

CSO: 2100/50

## FDJ ACHIEVEMENTS, ACTIVITIES HIGHLIGHTED

## Performance Statistics Published

East Berlin JUNGE GENERATION in German No 5, 1986 pp 7-10

[Text] Figures and facts from the report on the results of the "FDJ Ernst Thaelmann Drive," submitted to the general secretary of the SED Central Committee on 17 April 1986 on the occasion of the FDJ manifestation at the 11th SED Party Congress:

The reply to the appeal to youth of the 11th SED Party Congress is impressive. Promises have been kept, many plan quotas exceeded. Under the leadership of the party the youth of our nation has shown itself to be a reliable fighting reserve of the SED. Its record of success will be a rich source of further abundant initiatives for the youth association.

We would like to record the achievements in extract-form:

## Class-Conscious Behavior

- Over 2 million personal assignments were carried out;
- More than 107,000 candidate members of the SED came from the ranks of the FDJ;
- More than 91,700 student circle meetings, with more than 1.7 million participants took place during the FDJ academic year;
- 82,000 communists supported the FDJ as propagandists;
- More than 404,000 youth forums attended by approximately 6.9 million young people were held;
- 19,215 youth brigades and 10,192 basic organizations now bear the name of a revolutionary as an honorific.

## Economic Accomplishments for Peace

The obligations undertaken as part of the economic initiatives contained in the letter from the delegates of the FDJ's 12th Parliament to Comrade Erich Honecker were fulfilled as follows:

In the Ernst Thaelmann Drive we pledged:	As of the 11th SED Party Congress there were:
To utilize 4,760 industrial robots	6,336 industrial robots--that is 133.1 percent
To eliminate 16,500 jobs	21,240 jobs--that is 128.7 percent
To save 146 million man-hours	160.9 million man-hours--that is 110.2 percent
To win over 45,000 young workers for multi-shift work	60,444 young workers--that is 132.8 percent
To obtain a yield of 3,220 million marks in the FDJ-campaign "material economy"	3,503 million marks--that is 108.8 percent
To obtain a yield of 110.2 million marks in the FDJ-campaign "fodder economy"	137.1 million marks--that is 124.4 percent
To deliver 650,000 tons of scrap	806,521 tons of scrap--that is 124.1 percent
To deliver 140,000 of used paper	161,436 tons of used paper--that is 115.3 percent
To complete 28,600 apartments in the FDJ-campaign "refurbished and improved"	34,306 apartments--that is 119.9 percent

Thus, in all items of economic initiatives more than 36 percent of the 1986 plan goals have already been attained.

--700 party congress projects were completed;

--Today there are 45,332 youth brigades. Their numbers have grown since the 10th Party Congress by 7,497;

--The number of youth research collectives grew to 4,483;

--In the "FDJ-Initiative Berlin" 20,000 FDJ-delegates from all districts of our country and the Berlin construction workers obtained, within the framework of youth projects and youth assembly lines, among other things, a result of 15,427 new apartments, and they renovated 6,062 apartments;

--More than 2,500 youths worked on 9 component projects of the national youth project "Improvement in Production of Highly Refined Chemical Fiber Materials." The installation for the improvement of polyamide material production, the line for the production of polyester material, and the industrial test installation Regan-Super were completed;

--In the national youth project "Electrification of Railroad Lines" the 1,000th kilometer of electrified railroad line since 1981 was handed over by the 17,000 youths who are at work principally in 102 youth brigades;

--In the national youth project "Natural Gas Pipeline" more than 13,000 FDJ members, together with older workers, are fulfilling the export plan with great achievements in the construction of the large-scale pipeline, in the construction of the compressor stations, and in housing and community construction;

--The plan for the increase of agricultural yields by opening up 75,000 hectares of irrigated land was fulfilled with 87,530 hectares;

--In 173 district "Grain Harvest" youth projects in 1985 8,000 FDJ members helped to bring in the biggest harvest since the founding of our republic;

--The quota to rationalize 63,000 stalls in the 189 sponsored agricultural production cooperatives of the FDJ "Animal Production" initiative was fulfilled with 76,594 stalls. Altogether 161,197 stalls were built by youth projects;

--8,745 hectares were reforested in the FDJ "Healthy Forest" campaign;

--In the citizens' initiative "Beautify Our Cities and Communities--Participate!" more than 1,659 apartments, 2,409 spaces in child-care establishments, and 213 youth clubs or youth rooms have been created within the framework of FDJ sponsorship of 167 villages;

--FDJ apprentice groups completed 10,775 youth projects in the area of apprentice production at a value of 547.1 million marks.

#### Achievements of School Children and Students

--Since the 12th Parliament 2,996 electrical engineering/electronics work collectives have been founded in the construction industry and in agriculture;

--During the summer of 1985, 172,081 FDJ members were active in FDJ secondary school brigades;

--Today 13,746 youth brigades maintain a sponsorship of a pioneer collective;



--38,930 FDJ members act as pioneer group leaders; 20,124 of them are secondary school students;

--19,445 FDJ members lead Young Pioneer work collectives;

--20,000 students participated in the sociology competition "Youth and Socialism";

--At the 9th National Achievement Fair of Students and Young Scientists in 1985 2,071 projects were presented;

--In 1985 over 60,000 students participated in FDJ student brigades, generating an economic yield of 248 million marks.

#### Contribution to the Defense of the Fatherland

--In 1,715 aspirant collectives, FDJ members are actively preparing for military professions;

--71,026 members contributed to order and security in 6,805 FDJ monitor groups, especially at youth dances in youth clubs.

#### Friendship and Solidarity

--143,000 youths visited the USSR during the "Ernst Thaelmann Drive";

--Over 300,000 participants from the GDR and the People's Republic of Poland took part in 1985 in child and youth exchanges;

--17 friendship brigades provided active assistance in 9 countries of Africa, Asia and Latin America;

--Pioneers and FDJ members contributed to anti-imperialist solidarity with donations of 16.6 million marks to the "Anti-Imperialist Solidarity Account" and the "Toys for the Children of Nicaragua" campaign;

--2.7 million demanded the release of Nelson Mandela with their signatures.

#### Rich Cultural Life

--At present there are 9,930 FDJ youth clubs;

--Approximately 500,000 youths are developing their artistic abilities in 2,573 FDJ singing clubs, in amateur dance music groups, in artistic ensembles of the FDJ and other folk art collectives;

--Over 100 groups and soloists from 30 countries participated in the 15th and 16th political song festivals. The two events accounted for 160,000 visitors. Tens of thousands of FDJ members attended the "FDJ Song Summer" and the "International Song Tour";

--Hundreds of thousands of youths won the GDR sport emblem "Prepared for Work and for the Defense of the GDR";

--In 1985 2 million FDJ members competed for the FDJ National Council circulating trophy;

--FDJ members won 77 gold, 77 silver, and 58 bronze medals at world and European championships;

--In 1985 1.6 million youths stayed in 269 youth tourism establishments;

--300,000 GDR youths traveled with the FDJ's "Youth Tourist" travel agency to 35 countries in the world. Some 220,000 foreign youths visited our facilities.

#### Increased Strength of the FDJ

--22,000 FDJ basic organizations are bearers of an SED Red Banner of Honor with the images of Ernst Thaelmann and Wilhelm Pieck;

--33,000 young delegates represent the interests of young people particularly.

#### Youth Club Developments

East Berlin PRESSE INFORMATIONEN in German No 60, 27 May 86 p 6

[Text] The 9,556 FDJ youth clubs belong to the best-loved places for meaningful free time activity. They offer girls and boys of various age groups a rich choice of activities. The entire spectrum of intellectual-cultural life, ideological training and education, fellowship, dance, scientific, artistic, athletic, and touristic activities can be found in the clubs' offerings. The wealth of ideas and the energy of their full- and part-time leaders, as well as the approximately 150,000 members in the club councils, contributed to an increase in the abundance and quality of events. In the past year the FDJ youth clubs accounted for more than 30 million visitors.

In the past 5 years the number of youth clubs, youth club houses, multi-room youth clubs, and youth rooms has rapidly grown. It increased from 6,419 in 1980 to 9,556 in 1985. There are currently 440,100 facilities available to girls and boys--almost 84,000 more than at the beginning of the 5-year plan. That amounts to facilities for 154 per 1,000 youths; in 1980 the figure was 123.

The positive development occurred in all districts, but the picture is varied. While in the past year in Gera, Magdeburg, Schwerin and Suhl Districts there were facilities for 194 to 209 per 1,000 youths, Rostock District only reached 136, Leipzig 114, and Dresden 107. In the areas of greatest population density, the district capital cities, the provision of facilities was less than in the counties. Thus, there were 90 per 1,000 youths in Halle, 86 in Frankfurt/Oder, 85 in Leipzig, 77 in Rostock, 76 in Berlin, 70 in Cottbus, while in Dresden there were facilities for 61 in youth club accommodations.

Some 4,755 FDJ youth clubs, almost half of all these establishments, are located in urban or rural residential areas, apprentice dormitories, and occupational education facilities. There are more than 1,000 clubs at cultural establishments. With the 260 FDJ Student Clubs there is the opportunity at two-thirds of the universities and secondary and trade schools for students to organize their free time themselves in their own facilities.

The number of clubs grew especially rapidly at secondary schools. It now totals 2,430 and will continue to grow due to great student interest. FDJ administrative bodies, teachers, educators, and parents support this. FDJ youth clubs with full-time supervision located in the vicinity are to be made available to school children collectives during the afternoon more than in the past. There are 1,744 clubs in state enterprises and combines, as well as in cooperatives.

The youth of our country has enthusiastically seen to it that 150 multi-room youth clubs with facilities for 16,000 have been established in the housing complex construction program during the period of the 1981-85 5-year plan. This commitment was in accordance with a resolution of the SED Central Committee Politburo. At the conclusion of 1985, the 592d full-time supervised youth club took up its work. Since 1981--thanks to coordinated initiatives in the districts--a total of 164 FDJ youth clubs with facilities for approximately 18,000 were established within the framework of the housing complex construction program.

In the past year 189,200 events with over 14 million visitors, of which 57,300 were dances, were held in the full-time supervised youth clubs with facilities for 111,950. Some 38,000 girls and boys participated in various interest groups.

In the directive of the 11th SED Party Congress regarding the 5-year plan for the development of the GDR economy in the years 1986-90, there is a commitment to provide facilities for 18,000 in youth establishments within the framework of the housing complex construction program. Moreover, a youth club is to be established in each county utilizing agricultural resources.

The part-time supervised FDJ youth clubs were also able to show good results, with 227,650 events in the past year which were attended by 16 million, 106,050 of which were youth dances. Tens of thousands of youths committed themselves with much verve to an interesting and varied use of free time through activities in club councils, monitor groups, and other functions. Thousands of youths are participating in 3,350 interest groups. In first place is dancing, which appeals to the expectations of young people. Discussion panels and meetings with representatives of local state organs have a solid place. The FDJ youth clubs are also important venues of propagandistic work and of dialogues between youths and their legislative representatives.

An important goal of club work consists of accommodating the varied intellectual-cultural interests of the various social strata and age groups among girls and boys. More attention must be paid in this to working youth, particularly young shift-workers. This can be done when FDJ youth clubs maintain close contacts with youth brigades and help influence and develop the intellectual-cultural life.

There are many as yet unexploited opportunities in the youth clubs for individual discussions about political, professional and other questions, for convivial fellowship and mutual exchange of ideas, as well as the development of socialist relationships in the youth collectives. Festivals and celebrations for personal and community occasions could become traditional part of the work of the youth clubs. There are many good experiences along this line. Most members and visitors of the FDJ youth clubs are between 16 and 22 years of age. They include school children, apprentices, students, young workers, and employees. The percentage of girls and young women is high. There is a turnover of part-time associates approximately every 3 years, which, to be sure, causes certain difficulties in regard to the continuity of the work, but it reflects the changed conditions in their lives.

For years the girls' and boys' reasons for interested and committed participation in the life of their youth club have continued to become firm. Most of them state that they regularly attend the club and like to participate because they wish to be involved with their ideas in a meaningful use of free time and thereby be able to do something for others as well as for their own continued development. Many of them wish to learn how to plan, direct, and structure social activities.

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CSO: 2300/478

## BRIEFS

KARMAL MEETS OUTGOING ENVOY--Babrak Karmal, Afghan head of state, paid tribute to the positive development of relations with the GDR in Kabul today. Cooperation has been expanded and consolidated particularly by the signing of the friendship treaty 4 years ago. Babrak Karmal was talking to GER Ambassador Kurt Krueger, whom he had received for a farewell talk. [Text] [East Berlin Voice of GDR Domestic Service in German 1700 GMT 27 Jul 86] /9604

OUTGOING ENVOY TO SINGAPORE--Singapore, 29 Jul (ADN)--The maintenance of peace and the prevention of a nuclear catastrophe are the most pressing contemporary tasks according to Singapore President Wee Kim Wee. He said this to GDR Ambassador Werner Peters, whom he was receiving for his farewell visit. President Wee Kim Wee stressed that he shared the GDR head of state's assessment that the most extreme dangers confront mankind's fate. Therefore, a stop to arming and a transition to disarmament measures are tasks of the highest priority, to which all states and peoples have to contribute in accordance with their potentialities. [Text] [East Berlin ADN International Service in German 1644 GMT 29 Jul 86] /9604

CSO: 2300/490

## SIERADZ PLENUM CRITICAL OF PERSONNEL POLICY

Warsaw TRYBUNA LUDU in Polish 12-13 Jul 86 p 2

[Article by Kazimierz Zigmund: "Sieradz: On the Worker-Peasant Nature of the Party Organization"]

[Text] (Own information) An assessment of the implementation of the resolution of the 16th Plenum of the PZPR Central Committee and of the 5th KW [Voivodship Committee] Plenum on the subject of strengthening the worker-peasant nature of the voivodship party organization, using 9 city and district party echelons as examples, was the subject of the proceedings of the PZPR KW plenum on 11 July in Sieradz.

Many statements contained critical comments. It has turned out that gaining new candidates for the party is a much more complex process than it could appear at first glance. A great deal of influence upon the admission of new people to the party is exercised primarily by a good climate prevailing in the workplace, solid work, and, which is associated with this, the rational fulfillment of economic plans. In a word, it is everything that gives credibility to the party and convinces young people to enter its ranks, since these things are what has been discussed the most. This was discussed, among others, by Zdzislaw Krasinski, the first secretary of the plant committee at the Sieradz Construction Combine.

There are still enterprises in the Sieradz voivodship at which the process of reform is taking place with difficulty, the growth of productivity cannot catch up with the growth of wages, and energy is used up in the struggle for reduced rates and subsidies. After all, however, as was stated by Miroslaw Michalak, the first secretary of the PZPR city committee in Zdunska Wola, the party organization gains prestige mostly where enterprises have good economic results.

The plenum passed a resolution defining the further directions for activities by the voivodship echelon aimed at strengthening the worker-peasant nature of the voivodship party echelon.

The meeting was chaired by Janusz Urbaniak, a member of the CKKR and the first secretary of the PZPR KW in Sieradz.

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CSO: 2600/586

## TEMPORARY ARREST POLICY DESCRIBED BY PROSECUTOR

Warsaw RZECZPOSPOLITA in Polish 11 Jul 86 p 8

[Interview with Hipolit Starszak, deputy prosecutor general, by Jan Ordynski]

[Text] [Question] Recently critical opinions have appeared rather frequently in the press and in the doctrine about the policy of using temporary arrests. Above all, the accusation is made that it is used arbitrarily and without any clear necessity.

[Answer] If one takes into account all of the Polish press and the entirety of the scientific literature, then it is difficult to share the view about more frequent criticism of the temporary arrest policy. On the contrary, opinions are often expressed that demand more rigorous treatment of the perpetrators of crimes, and a more severe response to their actions as early as the preliminary proceedings. This has a great deal in common with the use of temporary arrests. Clearly the critical opinions must be taken into account, but in my opinion they appear sporadically. I also do not share the view that arrests are made too often. The clear increase in crime in recent years has required that criminal policy, broadly understood, be adapted to its scope. It is a tool of state policy in the fight against crime. Consequently, beginning in 1984, arrests have been made more often. In practice this means consistent isolation of the perpetrators of the most serious crimes: murders, assaults and robberies, rapes, burglaries, etc.

[Question] Arresting the most dangerous criminals does not give rise to any doubts. There are some doubtful examples, however, and those are the ones that are arousing negative repercussions. And after all, every improper arrest is one too many.

[Answer] Obviously, but it is not possible to assess a policy of using preventive measures in terms of one or two cases. We give special attention to every incorrect decision. We also investigate every case in which a temporary arrest is followed by an acquittal. For training purposes, we disseminate the results of these investigations widely. The fact that such incidents occur, however, does not justify far-reaching criticism of arrests.

[Question] In spite of the existence of different preventive measures, prosecutors are accused of usually resorting to the most severe one. Claims

are actually made that they are making their work easier, since it is fundamentally easier to question someone who is under arrest.

[Answer] I cannot agree with that. After all, no preventive measure is applied to 62 percent of all those accused. On the other hand, it is true that arrest has a dominant role among these measures. This obviously does not mean at all that the role of the others is not growing. For example, social guarantees were used with respect to about 9,000 people in 1985, and only 3,800 a year earlier. The corresponding figures for property guarantees were 2,300 and 1,600 people. On the other hand, 7,800 people were affected by MO [Citizens' Militia] surveillance.

[Question] Experts on the subject, however, claim that recently arrest is used 2.5 times more often than other preventive measures. Doesn't this incline the representative of the prosecutor's office toward the view that it is possible to stop using it here and there, especially in less drastic cases? Furthermore, those who are arrested do not learn anything good from the arrest, and this should also be taken into consideration.

[Answer] That is a very simplistic view, since an arrest serves to prevent a failure to appear in court. It is not a repressive measure, and does not mean the beginning of a sentence, although it is taken into account afterward when the sentence begins.

[Question] Let us then establish as precisely as possible the legal requirements for the use of temporary arrest.

[Answer] It is regulated by the Code of Criminal Procedure. Article 209 simply says that it is possible to make an arrest if the evidence collected against the suspect gives sufficient reason to believe that he committed the crime. This regulation defines the so-called material basis for the arrest. Its presence is essential in making any decision on isolation. The procedural basis, on the other hand, is as follows: a justified fear that the suspect will go into hiding, a fear that he will be inclined toward false testimony or other deception; if the suspect is accused of a crime or action under conditions of recidivism, or finally, if he is accused of an act whose degree of danger to society is considerable (article 217 of the Code of Criminal Procedure).

It should be noted in connection with this that the so-called episodic law of May 1985 introduced the obligation to make an arrest if the defendant is accused of a crime or action under conditions of recidivism.

[Question] All right, those are the legal requirements. On the other hand, what is the control by the courts and the prosecutors over adherence to them like? By the way, there is a fairly widespread opinion that the courts automatically confirm the prosecutors' decisions.

[Answer] That is an extreme view, and I do not agree with it. This year the courts upheld 1,214 appeals of arrests (about 8 percent). In my opinion, this demonstrates the correctness of the prosecutors' decisions. Also, a decision by the voivodship prosecutor to extend the arrest to 6 months can be appealed



to the proper voivodship court, and only the court can extend the arrest beyond that period. There is also the prosecution inspection, begun at the initiative of either the suspect or his attorney, or the prosecution organs themselves. At any time, the suspect can submit an application to have his arrest cancelled or changed to a different preventive measure. If such an application is turned down by the prosecutor imposing the arrest, this can be appealed to a superior prosecutor. Last year the prosecutors themselves changed 7,287 arrest decisions. I want to emphasize once more that an arrest is made in order to ensure the correct course of criminal procedure. As a sharp reaction to the commission of a crime, it is one of the effective instruments in the struggle against violation of the law. It interrupts criminal activity and gives society a feeling of security and of protection by the state organs.

[Question] No one questions the effectiveness of arrests. But let me go back once more to the question of whether conducting an investigation without making life easier for oneself would not be socially more justifiable.

[Answer] Answering this question requires some brief information on the principles by which we are guided in making a temporary arrest. The first one is a stricter view of particularly dangerous crimes, which is also associated with the larger number of people temporarily arrested in cases of the most dangerous acts. The second principle is consistently taking into account the differences among the crimes committed; this has to do with the so-called stratification of them. In effect, we treat less dangerous acts more liberally.

[Question] Can one hope, however, that as progress is made in the fight against crime the role of arrests will decline?

[Answer] Yes, obviously. I think, though, that the conditions have not yet arisen for relaxing prosecution policy or revising it.

[Question] What is the basis for that conclusion?

[Answer] Primarily the high level of crime, in spite of the present curbs on its growth. The measures undertaken so far in the struggle against violation of the law, including the measures associated with prosecution policy, have had positive results, but far from complete success. It is thus necessary to continue the activities that have brought the initial desired results. This should lead to a reversal in the trends toward an increase in crime, and to its decline.

[Question] It is possible to obtain assurances from you that in the course of the intensified activities against criminals and the natural desire to obtain a considerable success in this struggle, people will not lose sight of the individual, who, as a result of the combination of various circumstances, mistakes that are difficult to rule out, could find himself under arrest when he is innocent?

[Answer] Such fears are unfounded. In view of the extensive system of judicial and prosecution inspection, individual incorrect decisions, arising from different assessments of frequently quite complex evidence, do not permit their formulation either. The possibility of damages being awarded for an obviously improper arrest also has a protective effect.

## BRIEFS

SOLDIERS FILL TEACHER GAP--As has been the case in earlier years, so it is this year with the military coming to the aid of the educational system, which is struggling to deal with the shortage of teachers, especially in the elementary school system. The Pomeranian Military District has organized three specialized courses designed to train soldiers for jobs as school teachers. They receive instruction in the fundamentals of the social sciences, pedagogy, psychology, and teaching methods and philosophy; they then go on to do practicums in schools. After passing their final exams, 145 soldiers will embark on their teaching careers on 1 September 1986. [Text] [Gdansk DZIENNIK BALTYCKI in Polish 9 Jul 86 p 2] /9604

ZIELONA GORA DEFENSE COMMITTEE--The Zielona Gora Voivodship Defense Committee met yesterday in a field session held in the town of Gubina. In addition to other business, the committee made a detailed analysis of the flow of candidates for admission to military academies, higher officer schools, and warrant officer schools. For the past couple of years Zielona Gora Voivodship has ranked first in the Silesian Military District in terms of the recruitment of young people for enrollment in military colleges, warrant officer schools, and career NCO schools. Some of the schools in Zielona Gora Voivodship which have sent the most graduates to military colleges include the M. Kasprzak General Education Lyceum in Gubina and schools in Krosno Odrzanskie. It is just as difficult to get into the military schools as it is to get into any other institution of higher education. This is why potential candidates should familiarize themselves with entrance requirements, traditions, and the nature of their future military duties while they are still attending general education and technical high schools. Then they will not run the risk of being disappointed during entrance exams, psychological and mechanical aptitude tests, and physical fitness tests. The Committee also discussed general problems related to the patriotic and defense training of young people. A separate item on the agenda of this Voivodship Defense Committee meeting revolved around issues pertaining to the national defense, with special reference to the administration and performance of Civil Defense units. The Voivodship Defense Committee meeting was chaired by Voivodship Governor Zbyszko Piwonski. [Text] [Zielona Gora GAZETA LUBUSKA in Polish 10 Jul 86 pp 1, 2] /9604

FINE FOR 'SOLIDARITY' GRAFFITI--On 30 April [1986], the Regional Council for Crimes and Offenses for the Warsaw-Wola District punished Konstanty Jezynski

with a fine of 25,000 zloty for drawing symbols of a fighting 'Solidarity' on 29 April [1986] at 8 pm at Skierniewicka Street in Warsaw on the 'Foton' plant building--a place not intended for this--without the permission of the building management (Article 63a of the penal code). [Text] [Warsaw PRZEGLAD KATOLICKI in Polish No 31/32, 3/10 Aug 86 p 8] 9853/12913

VIEWS ON JOURNALISTIC CRITICISMS--Interview with Wiktor Kinecki, first PZPR Provincial Committee secretary in Gorzow, by Bronislaw Slomka published in ZIEMIA GORZOWSKA, 27 June: [Bronislaw Slomka] "...Our articles of criticism are, (unfortunately), answered by some comrades with entire silent campaigns based on searching for 'strong arguments' against the journalist who has written something critical and not against the wrong which has been brought to the public forum. What do you [first secretary] think about this? [Answer] I feel that I am most open to criticism expressed by my peer board [kolegium] or by the editorial staff. This does not mean that I am taking away the right of the individual journalist to subjective criticism. However, I believe that if the peer board or the editorial staff presents a critical viewpoint on specific matters, this is much more important than the published article of one author on some single issue. I believe that socially important issues should be raised in journalistic criticism--this deserves attention and I feel that every journalist, who works and verifies conscientiously that which he wants to criticize and who seeks the opinion of the one who is being criticized, deserves my respect not only as the first secretary of the Provincial Committee but also as a reader." [Excerpts] [Warsaw POLITYKA in Polish No 30, 26 Jul 86 p 2] 9853/12913

ACADEMIC COMPETITION LACKING--Interview with Antoni Dragan, chairman of the ZSP [Polish Student Association] Main Council, by Ewa Kluczkowska and Andrzej Nierychlo published in ITD, 29 June: [Antoni Dragan] "...The behavior in the student community is convergent with the behavior that is prevalent in wider social groups. Therefore, if competition for a better job or the faster execution of tasks is in its infancy in society, then it is difficult to expect that a geyser of activity will burst in this area [competitiveness] in institutions of higher learning. Let us take a look at the example of Japan. In elementary school, children compete for grades; in high school--for acceptance to a better university. When they go to work, it is competition all over again. And here at home, do we have a phenomenon which in a social sense we can call rivalry or competition for a better position, better wages, etc.? Simply put, does it pay to be good? Rather not." [Excerpts] [Warsaw POLITYKA in Polish No 30, 26 Jul 86 p 2] 9853/12913

CSO: 2600/619

## CONFLICT BETWEEN PERSONAL INTEGRITY, NECESSARY EVILS PORTRAYED

[Editorial Report] Bucharest TEATRUL in Romanian No 6, June 1986, pages 32-51, publishes a play in two acts by Adrian Dohotaru entitled "Concurs de imprejurari" ["A Chain of Events"]. The play deals with the trials and tribulations of a couple in their mid-thirties, Ion and Ioana, both persons of integrity and principle. Ioana, a highly qualified and experienced language teacher, wishes to transfer from her job to a research post with the Institute of Linguistics [city not specified]. This proves to be more difficult than she and her husband anticipated, despite Ioana's impressive accomplishments. Considerations unrelated to merit intervene, such as influence peddling and favoritism, practiced or condoned by officials in charge--which the playwright describes candidly and deplores morally through his characters and action. Though the play has a happy ending in that Ioana is awarded the post, so that justice is done, she refuses to accept it partly because of the loss of dignity she suffered in her prolonged effort to secure what is rightfully hers. Having just given birth to a baby daughter, she and her husband agree that other responsibilities are more pressing.

Along the way, the author drops various subtle as well as not so subtle hints of a political, social and philosophical nature. One character, the Prorector, states "I prefer to remain a man of science. The post of minister is too fragile. Today you're in, tomorrow you're out." At one point, Ion decides to join the Communist Party thinking this might help improve his wife's chances. He makes an appointment with Comrade Secretary Braniste, described as a "genuine human being, the best man of all those I [Ion] have known." Ioana reacts to this characterization by telling Ion not to "start a cult around him now," that "he's just a man like other men, only with more important responsibilities." Ion agrees, stating "someone told me it's important in life not to confuse occupation with personality and a night watchman with a thinker." Braniste, though his intervention on Ion's behalf is partly successful, eventually turns out to be a disappointment: he states he hopes Ion's wife will have twins "to make up for lost time." Insulted, Ion later remarks to a friend "these lackeys are capable of destroying anything and defying anyone. They act as if they own everything."

Ion's decision to join the Party is a last resort. He is forced to use other methods along the way to grease the wheels, such as petty bribery in the form of "buying chocolates, foreign cigarettes and expensive soap"

and enlisting the aid of a former girl friend whose self-admitted goal in life is "erotic freedom" and who proceeds to promise to an official in charge services of a sexual nature in return for helping Ion. Ion is driven to distraction by the moral depravity of such measures and subterfuge so alien to his personal character and outlook, as well as the meritocratic work environment he is used to (he is an engineer). He is adrift in a sea of moral confusion throughout the play.

As the play draws to a close, the couple discuss the significance of the events that have transpired. Ion is "ashamed that he was unable to keep filth out of their lives," that he has had to "abandon life principles" in his dealings with "cowards and rats, who promise and deceive." Ioana laments the loss of 10 years "taking tests, being certified, approved, stamped, sealed, moved from here to there, all by impersonal, indifferent people..." As a final irony, Ion is forced to hail a private cab "a thief, but what's the alternative, the world is full of thieves" in order to take Ioana, who has gone into labor, to the hospital. The curtain falls as one character, the Professor, drinks a toast to the birth of Ion's daughter warning "good people, do not play games with people's lives, do not insult their dreams, because the damage will be irreparable!".

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END